

The Mining Journal

RAILWAY AND COMMERCIAL GAZETTE:

FORMING A COMPLETE RECORD OF THE PROCEEDINGS OF ALL PUBLIC COMPANIES.

[The Mining Journal is Registered at the General Post Office as a Newspaper, and for Transmission Abroad.]

No. 2058.—VOL. XLV.

LONDON, SATURDAY, JANUARY 30, 1875.

WITH SUPPLEMENT. PRICE SIXPENCE. PER ANNUM, BY POST, £1 4s.

MR. JAMES H. CROFTS, STOCK AND SHARE BROKER,
No. 1, FINCH LANE, CORNHILL, LONDON, E.C.

BUSINESS transacted in all descriptions of MINING Stocks and Shares (British or Foreign), Banks, Bonds, Railways, Miscellaneous, Insurance, Assurance, Gas, Water, and Dock Shares.
BUSINESS negotiated in Shares not having a general market value.
BUSINESS in all COLLIERIES and IRON SHARES.
Accounts opened for the Fortnightly Settlement.
Bankers: City Bank, London; South Cornwall Bank, St. Austell.

SPECIAL DEALINGS in the following:—25 Bampfylde, £1 15s.; 20 Bilson and Crump, £10; 20 Birdseye, £3; 60 Cardiff and Swansea, £3 3s. 3d.; 100 Clee Hill, 6s. 9d.; 20 Cedar Creek, £1 7s. 6d.; 10 Consett, £22 10s.; 20 Chapel House, £4 10s.; 75 Glaisdale Quarry; 10 Great Western Colliery; 100 Gold Run, 15s.; 100 Javali, 4s. 6d.; 20 Langdale, £4 2s. 6d.; 100 Old Treburtet, 10s. 6d.; 25 Newcastle Chemical, £4; 20 Palmer's (23s. paid), £24; 70 Positive Assurance, 15s.; 20 Thorp's Gawber, £14 17s. 6d.; 50 Welsh Freehold, £3 5s.
NOTE.—SPECIAL BUSINESS in CHAPEL HOUSE. Shares on sale at lowest.

MR. W. H. BUMPUS, STOCK AND SHARE BROKER,
44, THREADNEEDLE STREET, LONDON, E.C.

Transacts business in MINING and COLLIERIES Shares of every description. English and Foreign Stocks, Colonial Government Bonds, Railways, Banks, and Miscellaneous Shares, and all Securities dealt in on the London Stock Exchange, for INVESTMENT or SPECULATION.
Purchases and Sales negotiated in Unmarketable Stocks and Shares.
Speculative Accounts opened for the Fortnightly Settlement.
References given and required when necessary.
A Stock and Share List forwarded to bona fide Investors free on application.
Bankers: The National Provincial Bank of England, E.C.

W. H. B. has SPECIAL BUSINESS in the undermentioned:—
20 Birdseye Creek, £3 3s. 3d. 25 East Caradon, 23s. 6d. 25 Richmond, £7 1/4.
40 Bampfylde, 42s. 150 Frontino, 6s. 3d. 20 Roman Grav, £12 1/2.
10 Bilson and Crump. 30 Flagstaff, £2 1/2. 25 Sweetland Ck., £2 1/2.
30 Bog, 13s. 6d. 30 Last Chance, 24s. 6d. 20 So. Condurrow, £5 1/2.
25 Bluen Cwmbach. 20 Ladywell, £2 16s. 3d. 30 South Prince Patrick.
20 Chicago (Silver), £3 1/2. 50 Malabar, 12s. 6d. 5 Tankerville, £10 1/4.
25 Cardiff and Swansea. 50 Malpas, 12s. 6d. 60 Tecoma, £1 1/2.
70 Chapel House, £4 1/2. 30 Melindur Valley. 15 Thorp's Gawber.
60 Cedar Creek, 28s. 6d. 20 New Consols, £2 1/2. 30 Tylwyd, 22s.
5 Cape Copper, £20 1/2. 50 New Hobb's Hill, £1 1/2. 25 Uni. Mexican, £3 8s. 9d.
100 Chontales, 11s. 50 Prince of Wales, 12s. 4 Van, £2 1/2.
75 Cathedral, 20s. 100 Penrithal, 13s. 9d. 50 Van Consols, £2 1/2.
25 Devon Consols, £2 3s. 9d. 30 Pennerly, 27s. 6d. 10 Wheel Grenv., £2 8s. 9d.
1 Dolcoath, £5 1/2. 150 Plynlimon, 3s. 6d. 20 Welsh Freehold.
10 East Lovell. 40 Parys Mountain, 8s. 6d. 75 West Maria, 7s.
50 Emma (Silver), £2 1/2. 70 Port Phillip, 16s. 10 Wh. Kitty (St. Agnes).
40 Eberhardt, £4 10s. 6d. 100 Rookhope, 13s. 10 Wh. Kitty (St. Agnes).

MR. E. J. BARTLETT, STOCK AND SHARE DEALER,
No. 3, GREAT ST. HELEN'S, LONDON, E.C., has SPECIAL BUSINESS, at the closest prices, in—
OLD TREBURGETT.
PARYS MOUNTAIN.
SOUTH CONDURROW.
OLD TALARGOCH.
MINERA (Buyer).
PRINCE PATRICK.
SOUTH TOLCARNE.
CARN BREA SHARES.

JOHN RISLEY (SWORN), STOCK AND SHARE BROKER,
77, CORNHILL, LONDON.

Turkish Six Per Cents. of 1854, 1855, 1862, 1865, 1871, and 1873 specially recommended; Wheel Grenville and Treleigh Wood, also Wheel Peavor and Crebor shares.
Business transacted at the following rates of commission:—Foreign Stocks, 1/4 per cent.; and Mining Shares of £4 each and upwards, 1 1/2 per cent.; under £4, 1s. per share.

FERDINAND R. KIRK, STOCK BROKER,
5, BIRCHIN LANE, E.C.

Consols, Foreign Bonds, Railways, and every security quoted on 'Change bought and sold. Fortnightly accounts opened.
Bankers: London and Westminster, and City Bank.

OFFERS WANTED FOR—
Bonville's Court Coal. United Bituminous. Silkstone Fall.
Clee Hill. Diamond Fuel. West Moslyn.
Newfoundland Lead. South Cleveland Iron. Javali.

MR. WILLIAM WARD,
CROSBY HOUSE,
95, BISHOPGATE STREET WITHIN, E.C.,
STOCK AND SHARE BROKER.

G. E. SIMPSON, STOCK AND SHARE DEALER,
6, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C., will sell the FOLLOWING SHARES, free of commission:—
75 Bog, 11s. 6d. 60 Marke Valley, 23s. 3d. 40 St. Patrick.
50 Birdseye Creek, £3. 40 Parys Mountain, 9s. 40 Sweetland Ck., £2 1/2.
70 Bampfylde, £1 10s. 30 Prince of Wales, 10s. 20 Tankerville, £9 1/2.
45 Chapel House, £4 7s. 6d. 40 Rosewall Hill, 7s. 20 Uni. Mexican, £3 3s. 9d.
50 Cedar Creek, £1 9s. 20 Richmond, £7 3s. 9d. 5 Van, £20 1/2.
20 Eberhardt, £4 17s. 6d. 15 Roman Gravels, £12 1/2. 50 Van Consols, £2 1s. 3d.
75 Gold Run, 13s. 3d. 30 So. Condurrow, £5 6s. 3d. 20 Wh. Greenville, £3 1/2.
5 Great Laxey, £10 1/2. 50 So. Carn Brea, £1 3s. 6d. 25 Wh. Peavor, £5 6s. 3d.

List of Investments forwarded on application.
JOHN MOSS AND CO., STOCK AND SHARE DEALERS,
224 AND 225, GRESHAM HOUSE, OLD BROAD STREET, LONDON, E.C., transact business for cash or account on all descriptions of Stocks and Shares.

J. M. and Co. strongly advise the immediate purchase of North Prince Patrick shares, as a great rise is certain.

Fortnightly accounts opened on advantageous terms.
J. M. and Co. have BUSINESS in the undermentioned SHARES, at quoted prices, free of commission:—
40 Bampfylde, £2. 100 Gold Run, 14s. 25 Richmond, £7 1/4.
30 Birdseye, £3 1/2. 20 Great Laxey. 20 So. Condurrow, £5 1/2.
20 Cape Copper, £30. 50 Hington, 22s. 25 So. Prince Patrick, 40s.
5 Carn Brea, £58. 30 Last Chance, £2 1/2. 100 St. David's, 22s.
50 Chapel House, £4 1/2. 50 Marke Valley, 28s. 100 Sweetland, £2 1/2.
40 Chicago. 20 New Rosario. 100 Tecoma, 29s.
70 Chontales, 10s. 20 Tankerville, £9 1/2. 20 Tankerville, £9 1/2.
70 Cedar Creek, 28s. 100 North Prince Patr. 22s. 300 Uni. Bituminous.
50 Conner. 75 Parys Mountain, 8s. 6d. 10 Van, £21.
10 Devon Cons., £2 1/2. 30 Pedn-an-drea, £2. 25 Van Consols, £2.
65 Don Pedro, 11s. 3d. 40 Pennerly, 27s. 6d. 20 W. Eagair Lle, £2 1/2.
25 Eberhardt, £5. 100 Penrithal, 14s. 10 West Chiverton, £3 1/2.
30 Emma, £2. 50 Prince Patrick. 50 Whitty Gas, to pay
45 Flagstaff, £2 1/2. 50 Prince of Wales, 11s. 7 per cent.
60 Frontino, 8s. 30 Roman Gravels. 50 Wyoming, off. wtd.

Circular now ready, and can be had on application.
Bankers: The London and County Bank, Lombard-street.
MESSRS. ENDEAN AND CO., STOCK AND SHARE DEALERS,
66, GREGORY STREET, LONDON, E.C.

Government and every negotiable Stocks dealt in for cash or account. Order and telegrams punctually attended to.
We advise immediate application and purchase of the BAMPFYLDE and LAXEY shares. A rise in price is inevitable.
MESSRS. HARVEY, JORDAN, AND CO.,
MINING AGENTS, ACCOUNTANTS, AUDITORS,
MANAGERS OF PUBLIC COMPANIES, &c.

OFFICES:—30, MOORGATE STREET, LONDON, E.C.
LONDON OFFICES OF THE LEANTRISANT TIN PLATE WORKS.

MESSRS. HARVEY, JORDAN, AND CO. undertake personally the INSPECTION of MINERAL PROPERTIES, the MANAGEMENT of COMPANIES entirely, or partially by keeping the accounts at their offices, or by periodical visits to the properties; AUDITING of ACCOUNTS, ARBITRATIONS, &c.

MR. HARVEY, of the above firm, having to VISIT the UNITED STATES and CANADA early in February on Special Business, is PREPARED to UNDERTAKE on the same journey OTHER COMMISSIONS to INSPECT and REPORT on MINERAL PROPERTIES, and furnish reliable information.

P. WATSON, STOCK AND SHARE DEALER,
79, OLD BROAD STREET, LONDON.

Bankers: The Alliance Bank (Limited); and Union Bank of London.

MR. ALFRED E. COOKE, STOCK AND SHARE DEALER,
79, OLD BROAD STREET, LONDON.
(Established 1853.)

The following shares should be purchased:—
GLAISDALE QUARRY, at 20s.; dividends expected in a few months.
CHAPEL HOUSE, at £4 1/2; dividends, 15 per cent., declared quarterly.
THORP'S GAWBER, at £14 1/2; dividends, 15 per cent., declared quarterly.
CAKEMORE COLLIERY, at £5; dividends expected in a few months.
All the above shares are fully paid. Full particulars may be had on application.
Mr. COOKE guarantees to supply the following shares, or any part:—
20 Bampfylde, 35s. 30 Chontales, 12s. 60 Penrithal, 13s. 9d.
20 Birdseye Creek, £3. 40 Emma. 30 Pennerly, 27s.
20 Bilson and Crump. 25 Glaisdale, 20s. 100 Parys Mountain, 9s.
40 Cakemore Colliery, £5. 50 Javali, 5s. 50 Rookhope, 13s. 6d.
25 Cardiff and Swansea. 20 Ladywell, £2 1/2. 70 Rica, 6s. 6d.
20 Cedar Creek, 27s. 6d. 100 Malpas, 12s. 3d. 10 Thorp's Gawber, £14 1/2.
50 Clee Hill Coll., 6s. 6d. 55 Marke Valley, 24s. 6d. 15 Tankerville, £10.
40 Chapel House, £4 1/2. 20 New Hobb's Hill, £2. 10 Wheel Peavor, £3 1/2.
40 Old Treburtet, 8s. 9d.
Shares may be had for settlement at the end of March, subject to the payment of a deposit of 20 per cent.
Cheques to be crossed Alliance Bank.

MR. T. E. W. THOMAS, SWORN SHARE BROKER,
3, GREAT WINCHESTER STREET BUILDINGS, E.C.
(Established 1857.)

The following are the latest prices at which business could be done. Holders of mining shares desiring a market quotation for their stock can have their application answered in this list if received not later than Four P.M. on Fridays:—

Buyers.		Sellers.	
Birdseye Creek, £2 1/2	11s. 6d.	Providence, £5	5 1/2
Bog, 11s. 6d.	12s. 6d.	Richmond, £7 1/4	7 1/2
Carn Brea, 58s.	57	Roman Gravels, £12 1/2	12 1/2
Cedar Creek, 13s. 6d.	13 1/2	Rosewall Hill, 7s.	8s.
Chontales, 11s.	12s.	St. Patrick, 1s.	1 1/2
Cook's Kitchen, 9 1/2	10 1/2	South Carn Brea, 1s.	1 1/2
Devon Great Consols, 13 1/2	2	South Condurrow, 5s.	5 1/2
Ding Dong, 6s.	8	So. Roman Gravels, 15s.	17s.
Dolcoath, 50	52	Sweetland Creek, 2 1/2	2 1/2
East Lovell, 7	7 1/2	Tankerville, 9 1/2	10
Eberhardt, 2	2 1/2	Tanvorst, 20	21
Emma, 2	2 1/2	Van, 4	5
Flagstaff, 2 1/2	2 1/2	Van Consols, 2	2 1/2
Gold Run, 11s.	13s.	West Basset, 7 1/2	8
Javali, 5s.	7s.	West Chiverton, 2	2 1/2
Ladywell, 2 1/2	3	West Maria, 6s.	7s.
Marke Valley, 1 1/2	1 1/2	West Tolgus, 65	67
New Consols, 2	2 1/2	Wheel Grenville, 5	5 1/2
Parys Mountain, 8s.	10s.	Wh. Kitty (St. Agnes), 4	5
Pennerly, 14	14 1/2	Wh. Kitty (St. Agnes), 5	5 1/2
Penrithal, 12s.	14s.	Wheel Peavor, 5	5 1/2
Prince of Wales, 9s.	11s.	Wheel Uny, 3 1/2	3 1/2
Prince Patrick, 2	2 1/2		

BARTLETT AND CHAPMAN,
STOCK AND SHARE DEALERS,
FINSBURY SQUARE BUILDINGS, LONDON, E.C.

Shares Bought and Sold at the closest net market prices.

MESSRS. PYNE AND ASHMEAD, CITY MINING AGENTS,
ACCOUNTANTS, AUDITORS, &c.
OFFICES: 6A, BISHOPSGATE STREET WITHOUT, LONDON, E.C.

Messrs. PYNE and ASHMEAD have taken the above offices for the London Management of Companies, the Auditing of Accounts, &c., and have a good Board Room for Directors' and other meetings.
The LIQUIDATION OF COMPANIES also undertaken, especially with a view to prompt winding-up, thereby avoiding unnecessary expense.

MR. HENRY CHAPMAN, STOCK AND SHARE DEALER,
WOOL EXCHANGE, COLEMAN STREET, LONDON, E.C.
(Established 20 years.)

Business transacted in every description of Securities including British, Foreign, and Colonial; also Railways, Banks, Insurance, Miscellaneous, and Mining Companies.
Holders of Mining Shares can obtain, free of charge, particulars of the exact position of any company they may be interested in.
Buyer of any part of 500 Lovells at 15s.; 1000 Patent Ligno Mineral Paving Shares.
All enquiries answered by return of post.

MESSRS. W. DUNN AND CO., STOCK AND SHARE DEALERS,
3 AND 4, GREAT WINCHESTER STREET BUILDINGS, LONDON, E.C.

Orders received and commissions executed.
Bankers: National Provincial Bank of England.

MESSRS. A. ENDEAN, FISHER, AND CO., STOCK AND SHARE DEALERS,
3, LOMBARD COURT, LOMBARD STREET, E.C.

Bankers: London and Westminster, Lothbury.

MESSRS. W. J. TALLENTIRE AND CO.,
STOCK AND SHARE BROKERS,
20, CHANGE ALLEY, CORNHILL, LONDON, E.C., transact business in
Stock Exchange Securities and Mining Shares of every description.

A Selected List of Safe Investments forwarded to intending investors post free upon application. Fourteen years' experience.

HARLAND AND CO., STOCK AND SHARE DEALERS,
255 AND 256, GRESHAM HOUSE, LONDON, E.C.

Transact business in Chapel House, Altamir, Cardiff and Swansea, Welsh Freehold, United Bituminous, and Clee Hill Collieries—Tankerville, West Tankerville, Lovell, Denbighshire, Tylwyd, Roman Gravels, Birdseye Creek, Sweetland Creek, and every description of Stocks and Shares.
Circular and Daily Price-List gratis.
Bankers: London and County Bank.

MR. HENRY MANSELL, STOCK AND SHARE DEALER,
14, GREAT WINCHESTER STREET, LONDON, E.C.

MR. THOMAS THOMPSON, JUN., 1, PALMERSTON BUILDINGS,
BISHOPSGATE STREET, LONDON, E.C.

Some valuable hints as to the purchase of mining shares will be found in Mr. Thompson's "Investment Circular" for January now ready, post free, price 6d.

MR. JAMES STOCKER, 2, CROWN COURT,
THREADNEEDLE STREET.

Railway, Bank, Foreign Bonds, and all other Stocks and Shares for Investment or Speculation.
SPECIAL BUSINESS in the following:—
50 Almada, 15s. 9d. 55 Great W. Van, 10s. 9d. 75 Richmond, £7 3s.
50 Bampfylde, 42s. 50 Grogynion, £2 1/2. 100 Rica, 6s. 9d.
50 Bellaville, off. wtd. 50 Gwatton, 10s. 9d. 70 Rio Tinto.
25 Birdseye, £3 1/2. 10 Hington Down, 10s. 40 Silkstone Fall, 26s. 6d.
30 Bilson & Crump. 15 Ifton Rhydy, 43s. 9d. 30 Sweetland, £2 11s. 6d.
75 Bog, 11s. 3d. 200 Javali. 80 South Aurora, 14s.
50 Cedar Creek, 28s. 9d. 40 Last Chance, 23s. 55 So. Carn Brea, 23s. 9d.
45 Central Van, 18s. 6d. 60 Lovell Tin. 30 So. Rom. Grav., 17s.
60 Chontales, 11s. 40 Ladywell, £2 1/2. 30 Thorp's Gawber, £14 1/2.
30 Chicago, £2 1/2. 50 Malpas, 12s. 30 Tecoma, 27s.
40 Clee Hill Coll., 7s. 55 Malabar, 12s. 6d. 100 Tylwyd, 20s.
70 Chapel House, £4 1/2. 30 Marke Valley, 24s. 9d. 15 Tankerville, £9 1/2.
25 Cardiff & Swan, £3 3s. 9d. 30 New Fowey, 7s. 6d. 10 Tincoff, £23 1/2.
75 Don Pedro. 35 N. Hobb's Hill, 40s. 100 United Bituminous, 7s.
20 Devon Gt. Con., 38s. 9d. 25 New Consols, 45s. 40 Van Consols, 42s.
10 Denbighshire, 41s. 50 Old Treburtet, 8s. 9d. 45 Welsh Freehold, £2 1/2.
50 Emma, 42s. 55 Penrithal, 14s. 1 West Chiverton, 44s. 6d.
30 Eberhardt, £4 10s. 6d. 55 Pennerly, 28s. 9d. 55 W. Eagair Lle, 37s. 6d.
25 East Lovell, £7 1/2. 25 Providence, £2 1/2. 25 Wheat Agar, 13s. 6d.
100 East Grenville. 70 Prince of Wales, 10s. 9d. 15 Wh. Greenville, £5 1/2.
55 Flagstaff, £2 11s. 3d. 40 Prince Patrick. 100 Parys Mountain, 9s.
60 Frontino, 6s. 3d. 100 Port Phillip, 17s. 15 Wheel Peavor, £5 1/2.
110 Gold Run, 14s. 9d. 30 Rookhope, 13s. 10 Wh. Kitty, £5 1/2.
50 Glaisdale, £1. 30 Rookhope, 13s.

Bankers: London and Westminster.

MR. CHARLES THOMAS,
MINING AGENT, STOCK AND SHARE DEALER,
3, GREAT ST. HELEN'S, LONDON, E.C.

MESSRS. A. W. THOMAS AND CO.,
10, COLEMAN STREET, E.C.,
MINING AGENTS, AND STOCK AND SHARE DEALERS.

ST. PATRICK MINING COMPANY.—Prospectuses and plans may be obtained upon application to Messrs. A. W. THOMAS and Co.

SAFE AND PROFITABLE INVESTMENTS.
Dividends 5 to 10 and 15 per cent. per annum. Read
SHARP'S STOCK AND SHARE INVESTMENT CIRCULAR.

It is the safest, most trustworthy, and reliable publication of the day.

FEBRUARY EDITION, NOW READY, TWELVE PAGES, POST FREE.

Safe Investments in English and Foreign Railways, Preference and Debenture Stocks, Telegraph, Water Work, Gas, Dock, Insurance, Bank, Tramway, Shipping, Tea, Land, Mine, and Miscellaneous Shares, &c.; Foreign Loans, Bonds, &c.; Indian, American, and Colonial Stocks. Dividends, Reports, Market Prices, &c.
CAPITALISTS, SHAREHOLDERS, EXECUTORS, INVESTORS, TRUSTEES,
Should read the above Investment Circular. It is a valuable, reliable, and Safe Guide for Investors.

GOULD SHARP AND CO., SHAREBROKERS, 33, POULTRY, LONDON, E.C.

Established 1852.—Bankers: London and Westminster, Lothbury, London, E.C.

TO INVESTORS.

MESSRS. PENNINGTON AND CO.'S "MONTHLY RECORD OF INVESTMENTS," published on the first Thursday in each month, contains an exhaustive Review of the British and Foreign Stock and Share and Money Markets, &c., with an enumeration of safe investments, paying from 10 to 20 per cent. Price 6d. per copy, or 5s. annually.

PENNINGTON and Co., Sworn Brokers, 3, Royal Exchange-buildings, E.C.

MR. E. CHARTERS, 36, NORTHUMBERLAND STREET,
CHANCERY CROSS, LONDON, can do BUSINESS in the FOLLOWING SHARES, free of commission:—

50 Almada, 15s. 9d.	20 Glasgow Carad., £1 1/2.	50 Rica, 6s. 9d.
25 Bampfylde, £2.	30 Green Hurth, £2 1/2.	20 Russia Copper, £3 1/2.
70 Bog, 10s. 6d.	30 Gunnislake, £2 1/2.	5 Roman Gravels, £12 1/2.
10 Birdseye Creek, £3.	20 Marke Valley, £1 1/2.	60 Rossa Grande, 1s.
2 Carn Brea, £55.	50 Malabar, 12s. 6d.	5 Tankerville, £9 1/2.
30 Cedar Creek, £1 1/2.	20 Malpas, 12s. 6d.	10 Tecoma, £1 1/2.
5 Cardiff & Swan, 4s.	40 Medlyn Moor, £2 1/2.	3 Tincoff, £23.
50 Cathedral, 15s. 9d.	50 New Fowey Con., 7s. 3d.	20 Van Consols, £1 1/2.
70 Don Pedro, 12s. 6d.	30 New Sharlston, £3 1/2.	30 West Chiverton, £2.
30 Devon Consols, £2.	30 Old Talargoch, £2.	70 West Maria, 6s. 6d.
30 Flagstaff, £2 1/2.	50 Plynlimon, 3s. 3d.	10 West Basset, £8.
60 Frontino, 6s. 6d.	30 Pennerly, £1 1/2.	8 Wheel Kitty, £5 1/2.
50 Gawton, 13s. 6d.	50 Pedn-an-drea, £7 1/2.	10 Wheel Peavor, £5.

Specially recommended.—New Fowey Consols Tin shares, at 7s. 6d. each, £3 fully paid; there are only 100 offered at this price, and none can otherwise be had under 30s.

MR. W. TREGELLAS, 122, BISHOPSGATE STREET WITHIN, E.C.,
Deals in all descriptions of Stocks and Shares at close market prices.

MESSRS. J. TAYLOR AND CO., 86, LONDON WALL, E.C.
and MINING EXCHANGE, SOUTH KING STREET, MANCHESTER,
MINING ENGINEERS AND INSPECTORS.
Business done in all descriptions of Stocks and Shares.

MR. TIMOTHY HUGHES,
59, SEEL STREET, LIVERPOOL.

The Registered Office of the PRINCE PATRICK, GROSVENOR, WEST BRYN CELLYN, and GREAT EAST FOXDALE LEAD MINING COMPANIES (LIMITED).
Full information respecting these Mines forwarded on application.

RELIABLE INFORMATION given respecting Mines in the Isle of Man, Flintshire, and the neighbouring districts.

CAPTAIN ABSALOM FRANCIS,
MINING AGENT, ENGINEER AND SURVEYOR.
GOGINAN, ABERYSTWITHE.

MR. R. PERCY ROBERTS,
FINANCIAL AGENT,
60, ENGLISH STREET, CARLISLE.

GROSVENOR, ENTWISLE, AND CO.
(LATE GROSVENOR AND CO.),
STOCK AND SHARE BROKERS
88, PORTLAND STREET, MANCHESTER.

SHARES WANTED, MARKETABLE.—A Gentleman has a large collection of OIL and WATER-COLOURED DRAWINGS which he WISHES to EXCHANGE. An easy way of acquiring a collection.
Address, "H. S.," 34, Devonport-road, Shepherd's Bush, London, W.

ADVANCES MADE ON SALEABLE GOODS IN STORE,
or on WARRANTS, or on good BONDS, SHARES, or SECURITIES.
£5000 would be placed as sleeping capital in some old established lucrative business where security could be given for the advance.
Principals only may address, "M. W. B.," care of Mr. Vickers, 5, Nicholas-lane, Lombard-street, E.C.

WANTED, by the Advertiser, who has had considerable experience in Mining, an ENGAGEMENT as RESIDENT SECRETARY and ACCOUNTANT. Accustomed to dialling and mapping. Has some acquaintance with French and Spanish. Situation at home preferred. Good references.—Address, "M. E.," Post Office, Stroud Green, London.

WANTED, a SITUATION as MINE AGENT, to SUPERINTEND the WORKING DEPARTMENT of any SILVER, LEAD, COPPER, or IRON MINES, at home or abroad.
First-class testimonials from present employers extending over many years' service, and most satisfactory references, can be obtained by applying to "H. P.," MINING JOURNAL Office, 26, Fleet-street, London, E.C.

WANTED, an EXPERIENCED MINING AGENT, to proceed to the Colonies forthwith, to INSPECT a MINING PROPERTY. Liberal terms.—Apply in the first instance, by letter, to "A. B.," MINING JOURNAL Office, 26, Fleet-street, London.

WANTED.—A YOUNG ENGLISHMAN desires an Engagement abroad as SUPERINTENDANT or UNDER MANAGER ON MINING WORKS. Has been four years engaged on Phosphate Mines in the South of France, and has had the sole direction of the works. Good accountant.
Address, "Williams," Hotel Bonnavais, Caylus, France (Tarn et Garonne).

WANTED, a RE-ENGAGEMENT. Advertiser is experienced in the MANAGEMENT of ZINC and LEAD WORKS, and an expert ANALYST and ASSAYER.
Address, "F. C. S.," Bettisfield House, Baglitt, North Wales.

A GENTLEMAN, who has just finished a four years' course, in the University of Freiberg, on Metallurgy and Mining, WISHES to MEET with an ENGAGEMENT as MANAGER of either SMELTING or MINING WORKS. Would have no objection to take for a time the post of General Under Manager or Assayer. Can produce first-class certificates.
Apply "H.," 13, Mansell-street, Stratford-on-Avon.

BLAKE'S PATENT ORE-CRUSHERS
NOW IN USE.
For catalogues, apply to—
MR. H. R. MARSDEN, SOHO FOUNDRY, LEEDS.
Only maker in the United Kingdom.

MR. JOHN CARTER, MINE SHARE DEALER,
CAMBURN, CORNWALL, transacts business in every description of shares at close market prices of the day.

THE NASCENT COPPER PROCESS.

The PROPRIETORS of this PATENT METHOD of TREATING LOW-CLASS SILVER and COPPER ORES are PREPARED to GRANT LICENSES for its USE at LOW ROYALTIES.

There is hardly a Mixed Metal mine in the world but may be made to pay dividends under this system.

All communications respecting the above should be addressed to—

MESSRS. EMMENS BROTHERS AND CO., 8, OLD JEWRY, LONDON, E.C.

Royal 8vo, 764 pp., cloth; with over 200 illustrations, drawn to scale, and reduced in many instances from working drawings. Price 34s.

ELEMENTS OF METALLURGY;

A PRACTICAL TREATISE ON THE ART OF EXTRACTING METALS FROM THEIR ORES.

By J. ARTHUR PHILLIPS, M. Inst. C.E., F.G.S., F.C.S., &c.,

Ancien Elève de l'Ecole des Mines, Paris.

"Possesses intrinsic merits of the highest degree. Such a work is precisely wanted by the great majority of practical workers. * * * In our opinion the best ever written on the subject with a view to its practical treatment."—*Westminster Review*.
"Mr. Phillips deserves well of the metallurgical interests of this country for having produced a work which is equally valuable to the Student as a Text-book, and to the practical Smelter as a Standard Work of Reference."—*Chemical News*.

London: CHARLES GRIFFIN AND COMPANY, 10, Stationers' Hall-court.

Lectures at the Royal School of Mines.

THE GEOLOGICAL HISTORY OF SOME OF THE MOUNTAIN CHAINS AND GROUPS OF EUROPE.

Prof. RAMSAY, in delivering his third lecture on the Geological History of the Mountain Chains and Groups of Europe, reminded his audience that in the last two lectures he had showed them the geological history of the great Scandinavian mountain chain, and that it was the earliest in date of the European chains, and that next to it came the Ural Mountains. Till we come to the Alps, said the lecturer, there is no other real chain of mountains of any great importance, and they are of much later date. I will, however, say a few words about the Vosges and Black Forest ranges before proceeding to give you a sketch of the formations which intervene between the date of the Ural and the Alps. The Black Forest range lies on the east of the Rhine, the Vosges on the opposite bank, in part of what is now West Germany. They do not deserve the name of chains, they are rather mere groups of hills, or mountains, of moderate height, about 3000 or 4000 ft., and in one place at least 5000 ft. I look on the upheaval of these as dating far back, perhaps as far back as the upheaval of the Scandinavian and Grampian mountains. The Black Forest consists to a great extent of granite and gneiss—metamorphic rocks, in fact, of the same nature as those of the Scandinavian chain; and the Vosges on the south, towards Switzerland, consist of similar rocks, which are metamorphosed Silurian strata. These bosses of metamorphic rock—for they are, in truth, only gigantic bosses—appear to have been upheaved at the same time as the Scandinavian mountains, though not nearly to such a height, and to have formed a part of that great continent which occupied the north part of Europe. On that land lay the great lakes in which the Old Red Sandstone strata were deposited. A section of the Rhine valley at this part would give us the Vosges hills on one side, the Black Forest on the other, and the valley between and on the edges of the mountains lie patches of New Red Sandstone, dipping down the plain to the river on one side, and rising on the other. Further north in the valley these patches form table lands, the strata being flat, and the rocks on which they lie being of a kind similar to those which form the Black Forest range. And the same is the case in the western part of the Rhine valley; the strata, nearly horizontal, lie on rocks of Silurian age, more or less metamorphosed. These mountains are, therefore, of much older date than the New Red Sandstone. A valley occupying the same position as that which the valley of the Rhine now occupies is of older date in that region than the deposition of the New Red Sandstone.

Before proceeding to speak of the great chain of the Alps, I will give you a brief sketch of the formations which come between the Permian strata and the end of the Eocene, as they are termed—the great divisions being the New Red Sandstone and marl, lias, oolite, cretaceous, and the Eocene itself. Of these rocks the Alps are composed, and when the Scandinavian and Ural chains were raised up into the air they would not yet have begun to be deposited. The New Red Sandstone in England over the larger part of its extent is found to lie directly upon some part or other of these Permian strata; and usually the New Red beds lie somewhat unconformably upon the Permian, showing that there is a gap in time between the deposition of the New Red Sandstone and the Permian, the latter having been disturbed, and wasted and worn by the action of rain and rivers, before the deposition of the other formation began. In England they consist at the base of beds of sandstone and conglomerate, and above these lie certain other strata of red marls, containing in parts beds of rock salt. The red colour is one proof (not the best) of their having been deposited in inland lakes; in the new red marls and sandstones the best evidence is that of the occurrence of beds of rock salt in Worcestershire and Cheshire to a thickness of 200 ft. Recently at Middlesbrough a bed of rock salt, 100 ft. thick, was found, and a few weeks ago I heard that Mr. Bell, of Middlesbrough, in a boring north of the Tees, after passing through a similar bed to the last mentioned, found a second bed, 10 or 12 ft. thick, in the magnesian limestone. I was very pleased to hear of this; it seemed to be the missing link in the chain of evidence by which I had attempted to show that the Permian strata were deposited in inland salt lakes. We have seen that when the water carried into a lake by rivers does not exceed (or better still if it be less) that carried off by evaporation, then the lake inevitably grows brackish, and finally salt. Lake Utah, in North America, is of this kind, its waters forming one of the most concentrated brines in the world. In this case some of the rivers flowing into it are salt, the rain which percolates into the soil, dissolving some salt from the soil, comes to the surface again in the summer, and is evaporated, leaving its salt as a crust on the surface, and this is ultimately washed into the rivers. At various parts round the lake are terraces, proving the waters to have formerly stood at higher levels. So concentrated are the waters that in summer, when in parts they retire some distance, they leave the bed covered with a layer of white salt.

Let us look back for a moment. The Old Red Sandstone was deposited in great inland lakes in the north part of Europe; then the carboniferous series, which are partly marine, also testifying in the beds of coal to the continuance of the old continent of the preceding age; and the Permian strata, again, were deposited in great salt inland lakes; and now we have the New Red Sandstone and marls, and they were deposited in salt lakes; so that from the close of the Upper Silurian period through all these formations up to the time when the Lias began we have had a continued continental epoch, extending over vast tracts of ground quite continental in their character. All these used to be considered marine, and this new revelation forms quite an epoch in geological history. And it is not in Europe alone that this is found, for in North America—at least on that portion of it which I know, the eastern—you find the same series of events, Old Red Sandstone of the same colour, with land plants of the same kinds as ours, succeeded by the very divisions of carboniferous rocks with the bed of coal; followed by the Permian and New Red Sandstone, also agreeing with the same formations in our own country, with beds of rock salt, and in many instances fossils identically the same. In South Africa there are coal measures and Permian rocks strongly resembling ours, but I know nothing of the New Red Sandstone there. And in the centre of

India are found coal measures, and sandstones, and marls, and conglomerates, precisely like our Permian beds, so that it would appear as if in different parts of the world, at the same time, there were similar episodes going on to those I have described as characteristic of the British Isles and a great part of North Europe.

The deposition of the New Red beds was brought to a close by a general sinking of the land. What had previously been a salt lake was now invaded by the waters of the ocean, and the result was the deposition of the Lower Lias beds, which are exclusively marine. Above the Lias you come to beds of the Oolite series, of which the Lias really forms the lowest member; some of the fossils of the Lias passing up into the inferior Oolite. The Oolite consists of beds of sandstone, of yellowish limestone, and of blue clay; in one bed, known as the Stonesfield slate, the oldest remains of mammalian life are found. These were marsupials, the largest not bigger than a rat, the smallest about the size of a mouse. The Portland beds of the series—a limestone—have always been a favourite building stone, St. Paul's, St. Martin's, and other churches of the time of Wren being built of it. In the southern part of England all these are marine beds, but passing north some are found of brackish and even fresh water origin, and in Yorkshire a few poor beds of coal occur. Numerous reptilian remains occur in these beds, of a similar kind to those found in the Lias—Ichthyosaurus, Plesiosaurus, Pterodactyl, &c., but of different species. Altogether the evidence seems to show that the seas of the period were warm, the plants are of a sub-tropical character, and geologists agree that the probabilities are that the deposits were accumulated round islands, most likely portions of the old continent of which I have spoken. The fossils in the different divisions are to a great extent distinct, but not altogether distinct, there is a community of species more or less between them, and a gradual passage from one series into another, and the course of investigation is always tending to show that more of them are common to two or more formations than was previously supposed.

We next come to the Wealden beds, which are developed in Kent and Sussex, and spread westward into Hants, appearing horizontally on the margin of the Oolites. These strata are almost altogether of fresh water origin, the reasons for the conclusion being that the fossils found in them consist of fresh water shells (Unio, Paludina, &c.); the shells prove it, the land plants help to prove it, the crocodilian remains and those of fresh water turtles unite to help to prove it; the fish in it show nothing to the contrary. The strata, however, were not formed in lakes, for the whole of the evidence tends to show that they were deposited at the mouth of a great river, forming a large delta, comparable in size, perhaps, to that of the Ganges at the present day. With regard to the size, the strata extend from Hants into France—say, about 200 miles long, and about the same in width. This river must have drained a large continent, probably equal in extent to any we know at present; and this period was brought to an end by the gradual submergence of a large portion of that old continent, and we are thus brought to the beginning of the deposition of the next great formation—the Cretaceous. Of this the chalk forms the principal member; it extends on our own coast from Beachy Head to Lyme Regis on the south, east to Dover, through the centre of England away into Yorkshire, while some outlying patches seem to show that formerly it had extended into Ireland and Scotland. The strata are sometimes not less than 1000 or 1200 ft. thick. At the base lies the green-sand, which contains nothing of fresh water origin, the fossils being exclusively marine, as are also those in the succeeding members—the gault, the upper greensand, and the chalk. Therefore it would seem that the old continent through which the Wealden river ran must have been submerged to a very great extent. When you examine the chalk microscopically you find that it is chiefly composed of minute organisms, termed Foraminifera; and it is also found that the "ooze" dredged up from the bottom of the Atlantic is similarly constituted; although the general character of the fossils in the two cases is the same, only a very few species are identical, of which the chief is Globigerina. It seems, then, that the Foraminifera of the Mid-Atlantic have their ancestry represented by those in the chalk, and as these are not found in shallow waters it shows us how great must have been the submergence. My own opinion is that this submergence must have been so complete that the greater part of Britain must have been buried under the chalk, that the present boundaries of the chalk have little relation to the extent of ground over which it formerly spread. I believe that it passed over the Bristol Channel, covered the central area of England, passed into North Wales, and across into Ireland. I go further than this, and say that it is most probable, though I am not quite certain, that the hilly parts of the North of England and Scotland, and also those of Wales, were under water during that period, with the exception, perhaps, of the tops of the highest hills. When we consider that a large part of the mountains of Switzerland, and even the Caucasus, consist of these strata, that they are found still further east, we can only compare that ocean to the one we now know as the Pacific.

The last of the formations we have to consider to-night is the Eocene, which succeeds the Chalk. It consists of various subdivisions, comprising the plastic clay, Woolwich and Reading beds, London clay; then there are the Bagshot sands, and other strata of the Upper Eocene, largely developed in the Isle of Wight and in the Hampshire basin. The Woolwich and Reading beds are partly marine, but for the most part are fresh water deposits. The bed of the old chalk ocean having again upheaved into land, there was again a large continent, but in this region without the formation of any great mountain chains; by a process of gradual upheaval what had been sea for so long was again transformed into land, and over that land another great river flowed, comparable in size to that of the Wealden; and the Woolwich and Reading beds were the first formed by that river at its mouth; and as you might expect of an estuary, beds of fresh water shells intermingled with sea shells. In the London clay the shells are entirely marine, and for the most part somewhat of a tropical character—nautilus, volutes, murex, &c., and the general impression made upon you is that there was a warm climate at the mouth of this large river. In the London clay of the Island of Sheppey occur large numbers of land plants—coniferous plants, nuts, and palms, the nuts strongly allied to those now brought down in large quantities at the mouth of the Ganges. In the Upper Eocene beds of the Isle of Wight and Hampshire the fossils become almost exclusively fresh water again; possibly they, too, might have been deposited in the estuary of a great river. Plants are numerous, and there also occur (especially in the Paris basin) a considerable number of terrestrial mammalia, which are much more

closely allied to those of the present day than were the mammalia of the Purbeck beds and oolites.

SOUTH STAFFORDSHIRE AND EAST WORCESTERSHIRE INSTITUTE OF MINING ENGINEERS.

The eight annual meeting of members was held on Monday, in the Dudley Geological Museum. Mr. JOHN FIELD, the retiring president, took the chair at the commencement of the business, and he was supported by Mr. John Hughes (vice-president), Mr. H. Johnson, sen., Mr. David Peacock, Mr. W. North, Mr. W. Spruce, Mr. T. Parton, Mr. H. M. Morrison, Mr. J. M. Fellows, Mr. G. Spruce, Mr. J. Dando, Mr. W. Blakemore, Mr. Hayward, &c. The report of the council showed that the prosperity of the Institute continued. The number of new members in the year had been 18, and the Institute now had 238 members. Death had carried off one honorary member and two ordinary members. The former was Mr. Southern, a gentleman who acted with the greatest courtesy to the members of the Institute, and had been of great service to them on their visit to the Newcastle coal field. The report then alluded to the pleasant excursions and exhibitions of models, &c., during the year, and said a vote of thanks was due particularly to the directors of the Waterworks at Aston and their engineer, Mr. Gray. The experiments with dynamite and new white gunpowder in the Earl of Dudley's pits were of great interest, and the thanks of the Institute were due to Mr. E. F. Smith. The most important excursion had been the one to Barrow-in-Furness and the English lakes, when the world-renowned steelworks and hematite deposits belonging to the company were inspected. The jute mills and shipping docks were also examined with interest. The best thanks of the Institute were due to Mr. Josiah Smith, on behalf of the Barrow Company, for the hospitable and courteous manner the members were received. Of the "home" excursions the most important since the Institute began was the visit to the Earl of Dudley's pit at Old Park, when there was a contest between three coal-cutting machines for a premium of 20 guineas. All the machines failed to do the amount of work required, but the premium was divided to encourage the inventors. In addition to Mr. E. F. Smith, the thanks of the Institute were due to Mr. W. Jeffries and Mr. W. Spruce for the arrangements made by them. The council regretted the resignation of Mr. Henry Johnson, jun., as secretary, in consequence of ill health and the pressure of private business. In conclusion, the council invited papers from the members, and trusted that the usefulness and prosperity of the Institute might increase from year to year. The report was adopted, as were also the balance-sheet and treasurer's report.

The PRESIDENT then read the scrutineers' report as to the elections for the year, and this stated that Mr. John Hughes, the vice-president, had been elected president; Mr. Wm. Spruce, vice-president; Mr. Latham re-elected treasurer; and the six members of the council to be elected were—Mr. Field, Mr. John Skidmore, Mr. M. Fletcher, Mr. D. Rogers, Mr. T. Lloyd, and Mr. W. Hayward. Mr. John Hughes then took the chair. Mr. Wm. Spruce declined the honour of vice-president, and the newly-elected president declared Mr. Thos. Latham, the next on the voting list, elected vice-president. Mr. Thos. Latham then resigned the post of treasurer, and the president declared Mr. Thos. Brettell treasurer in the place of Mr. Thos. Latham. Mr. Alex. Smith, C.E., was unanimously elected secretary.

The PRESIDENT moved a vote of thanks to the retiring president, who, in reply, congratulated the meeting on the amount of work done during the year.—Mr. LATHAM also returned thanks. The newly-elected President then delivered his inaugural address. After alluding to his connection with the Institute, and the work done in the past, Mr. HUGHES said: Recent mining legislation deserves the serious attention of every Institution like this, and we should all do well to study more closely than we have already done the different subjects mentioned in our first rule, to which I have already referred, for you are too painfully aware of the severity of some of the restrictions under which mining engineers and others connected with collieries have to work, and how difficult it is at times to comply even with the spirit of the Coal Mines Regulation Act of 1872. I, however, hope that every member of this association will act with a determination to secure the carrying out of the law as far as lies in his power, and that ere long greater unanimity will exist among all classes connected with mining enterprise. The numerous visits which have been made by your Institution to important collieries and works in the kingdom (not forgetting the visit to Belgium) have given its members rare opportunities of obtaining scientific knowledge. Most of those visits, as you are aware, were highly interesting and instructive, and the manner in which colliery proprietors and others imparted valuable information and threw open their establishments and mining records reflects upon them the highest possible credit. To put the matter shortly—our members were allowed to ask what questions they chose, to take what notes they liked, and to copy anything for their own benefit in the way of improvements. Such visits are not to be underrated, and are valuable alike to mining engineers and their employers. Of late we have heard very much about South Staffordshire being nearly worn out. Gentlemen, eminent in their profession, have ventured such statements, and popular lecturers have also followed suit, but I think we may with safety repudiate all such allegations; for, in my opinion, this district of ours is in a far better position as regards its coal supplies than it was ten years ago. The old style of winning mines is rapidly disappearing; the old and inconvenient shafts of 5 ft. diameter or less are being abandoned, and new ones sunk; in some instances they are from 12 ft. to 15 ft. diameter. The old kind of machinery is fast falling into disuse, and new and improved machinery is being substituted; in fact, thanks to the improved intelligence of the country, we appeared to be drifting into an altogether different state of things, which will be for the common good.

The recent development of the coal fields on the south-western boundary, and the undertaking at Sandwell Park, are matters of no small importance to our district; and our congratulations may, I think, be fairly extended to our friend present, who has been so intimately connected with the latter enterprise. It has been alleged that one district is losing cast in regard to the manufacture of iron, in consequence of the introduction and use of foreign ironstone. It is too true that large quantities of stone are being imported, to the injury of South Staffordshire; for during the past three years only comparatively small quantities of ironstone have been raised in our district, owing to the shortness of ironstone getters. During the exceptionally good times through which we recently passed, these men gradually withdrew from the ironstone mines and entered the coal pits, where they found the wages better than in the ironstone mines. Hence the shortness of supply and the importation of foreign and inferior stones. This state of things may, perhaps, go on until the Mines Drainage Act is in full operation, when the lower measures, now under water, may be released, and our native ironstones again put into the market in larger quantities than heretofore. As regards the Mines Drainage Act itself, I am not quite so sanguine as some are that the scheme will achieve all that was contemplated. My own fear is that as collieries become exhausted, and colliery proprietors less inclined to open mines, the Commissioners will feel less interest in the scheme than at present. I am strongly of opinion that something should be done to utilise the water raised from the mines, and it seems to me that arrangements could easily be made by which local boards, for instance, could lay down pipes for supplying water to different districts at nominal rates without materially interfering with the present arrangements with waterworks companies. Turning, again, to the work of our own Institute, lectures which have from time to time been given have afforded valuable information on mining matters to all the members who have taken the trouble to attend them. I have long since felt the necessity for a chemistry class in connection with this Institute, for the special benefit of its junior members. The importance of such a class, and the advantages which would be derived from it, would not, I think, be questioned. Having thrown out the idea, I will only here add that it would be very gratifying indeed to me to see such a class established during my term of office. I shall also be glad of the benefit of any suggestion you may have to offer as to the desired amalgamation of the Dudley

Geol.
Staff.
neers
unite
than
The
surer,
This
He sa
or tw
memb
for th
subse
secre
pleme
amou
subst
said i
what
mining
The
on "C
was p
was o
next m
their c
Mr.
Under
disting
several
and de
come u
The
Detach
Appar
applian
in the
involvi
The inv
geore
to comb
cannot b
apparatu
come to
the Cleve
to such a
of attach
excessiv
of detail
act of det
prevent
arising fr
a source o
against
connection
come to en
through s
detaching
cases a str
collar-pla
bably, dov
being in u
of attach
of the app
takes plac
the support
well and s
attachment
possibilit
pin or pins
(under circ
under circ
which may
These, th
past invent
a simple m
jections ar
even by pr
mechanic
generally i
suit, accid
dents occu
rits of whi
may be det
link, and th
also the dis
ture becom
which, the
The hook c
a manner t
which clip
provided e
made to ret
In position
clamped) p
in contact
jaws are be
off, and the
ternal diam
shackle pin,
by the actio
ring, the sh
pully, leavi
Having th
way this inv
1. When the
ment of sev
and as this
mum.—2. N
as (owing to
open and rel
without refe
event of the
pins, and to
then open in
as if to comp
to make a cor
has taken p
this hook t
immediate r
In some pa
which as tim
over-windin
release, the s
edge of the r
arrangement
per pins are
will be at c
internally, th
place. It re
and certain i
come derang
vement Fro
tivity, and th
It is now at
5 tons) from
the Sea, and
There are als
district, as a
been introduc
the working
of the copper
In the co
of this hool
notice will
the practica
opinions as
Mr. H. G.
the prevent
firm of W
Drill, which
THE CHA
burgh Fro
vention—th
with extinc
tube 3 in. o
turns a scre
which also
of the tube,
dified colloid
sides, is slip
upwards by
end of the f
turned upon
is thereupon

Geological Society, the South Midland Institute, and the South Staffordshire and East Worcestershire Institute of Mining Engineers. My own opinion of the matter is that the three societies united would be in a position to do very much more practical good than can be accomplished by them separately.

The Ex-PRESIDENT then proposed a vote of thanks to the treasurer, the council, the ex-secretary, and the auditors and scrutineers. This was carried unanimously, and Mr. Thomas Latham responded. He said that during the six years he had held office he found one or two items were very heavy, and postage was one of them. Those members who were in arrears helped to swell this item very much, for they have had circulars, programmes, &c., without paying their subscriptions.—Mr. Blakemore paid a high compliment to the secretary (Mr. Johnson, jun.), just resigned; and Mr. Parton supplemented the remarks, by saying that Mr. Johnson had done a vast amount of work, and done it well. He should be glad to see some substantial recognition of his services.—Mr. Henry Johnson, sen., said it would be distasteful to his son to receive anything beyond what he had received as paid secretary.—Mr. Arthur Tulwood, mining engineer, Upper Gornal, was nominated as a member.

The first paper read was by Mr. H. M. Morrison, of Manchester, on "Compressed Air, and its application to Mining Operations." It was purely elementary, giving the theory of air compressing, and was only intended as a preliminary to a paper to be read at the next meeting upon the several machines at present in use, detailing their capabilities and failings.

Mr. T. Parton, F.G.S., then read a paper upon "Disturbing Forces Underground," in which he drew attention to the two great and distinct divisions of rocks—the igneous and aqueous; and showed by several interesting sections the effect of both the basaltic eruptions, and denudation upon the coal measures of the district which had come under his own notice as a mining engineer.

The following paper by Mr. Hall, of Birmingham, upon "Walker's Detaching Hook for preventing Over-winding," was then read:—

Apparatus for the prevention of over-winding has often been combined with appliances for arresting the fall of the load through breakage of ropes, gear, &c., in the shaft. The result has been in many cases the production of elaborate devices, involving great outlay, exact fittings, constant inspection, and frequent renewal. The invention of this hook, believing that the best remedy against the breakage of rope, gear, &c., is to renew them more often than is usually done, has not sought to combine these two objects, but has endeavored to prevent such accidents as cannot be remedied by a renewal of rope, gearing, &c. The existence of this apparatus is due mainly to the short-comings of other appliances used by or having come to the knowledge of the patentee, a mining engineer at extensive mines in the Cleveland district. Past experience suggested to him the following objections to such apparatus as come under his notice.—1. Some appliances, from the mode of attaching the load to them, and from the mechanical means adopted, throw an excessively additional burden or strain upon the rope, tackle, &c., at the moment of detaching, so much so that ropes, &c., have broken, in some cases, whilst in the act of detaching, giving rise to the consequences that the apparatus is intended to prevent.—2. Other apparatus, depending on calculating upon the momentum arising from a quick overwind, have been found in case of a slow one to be really a source of rather than a remedy against the accident they are designed to guard against.—3. Others, again, require that the hook, or plates or levers, giving the disconnection shall be pulled fairly and fully through the disengaging collar-plate or cone to ensure absolute safety and perfect disengagement. Failing a complete wind through should the engine reverse or set back his engine (the whole process of detaching not having been completed) there remains a possibility, and in some cases a strong probability, of a disengagement taking place at the underside of the collar-plate or cone instead of at the top side, leaving the load to find its way, probably, down the shaft.—4. Other apparatus has been brought forward, which after being in use for some time throws a greater strain on the rope, &c., at the moment of attaching them when the appliance is first used; in other words, the daily wear of the apparatus adds to the strain which the rope, &c., has to bear if an overwind takes place.—5. Others, also, allow the disengaging load to fall heavily back upon the supporting ring or plate, in consequence of the apparatus requiring to be pulled up and smartly through the disengaging collar-plate, cone, or ring before detachment can take place. This shock may, as can be imagined, lead to serious possibilities.—6. And finally, some apparatus are so constructed that the copper pin or pins usually employed to retain or be a check upon certain parts will not (under circumstances to be referred to presently) indicate a severance of it or them which may have taken place.

These, then, are the chief objections of a purely mechanical nature against which past inventors have had to contend. In this hook it is believed and affirmed that a simple mechanical arrangement has been worked out, by which the above objections are fairly met. There are, however, a class of objections sometimes made, even by practical men of high standing, against which it would be useless for a mechanic or anyone else to attempt to stand. These objections may be stated generally in the proposition that "Safety-guards make men careless, and, as a result, accidents become more frequent." This proposition reversed reads "Accidents occur least where there are the fewest safeguards," an assertion into the merits of which it is hardly worth the time of this meeting to enter. The apparatus may be described as follows:—The winding-rope is attached to the shackle or D-link, and the load to the connecting link or ring. The supporting ring, which is also the disconnector (and through which the rope is constantly working) is a fixture between two oak baulks or iron girders at the frame top under the winding-wheel, the baulks ending resting on the upper bay trees or other convenient supports. The hook consists of a pair of jaws or bent levers, working on a centre pin in such a manner that the weight of the load has a tendency to open the upper limbs, which clip the strong square pin of the shackle or D-link, and the upper limbs are provided externally with undercut jaw-hooks. The jaws are kept together and made to retain the pin of the shackle or D-link by means of a clamp, which is held in position by the pins. In case of overwinding the jaw-hooks (held together by a clamp) pass freely into the ring, but the horns or projections of the clamps coming in contact with the bottom edge of the ring hold the clamp stationary whilst the jaws are being pulled through, the result being that the copper pins are sheared off, and the jaw-hooks are released from the restraint of the clamp, but as the internal diameter of the ring is just as much as the width across the jaw-hooks, the shackle pin, rope, &c., remain secure until the jaw-hooks reach the top of ring, when, by the action of the load itself they are forced open, and so hook on to the top of the ring, the shackle, or D-link, and capline and rope passing harmlessly over the pulley, leaving the cage safely suspended.

Having thus described the hook and its working, I now propose to show in what way this invention meets the objections named at the commencement of this paper. 1. When the rope and gear, &c., have broken, the disengaging load is at the moment of having to draw the jaw-hooks or levers through the clamps, and as this draft is along the parallel surfaces, the resistance is removed to a minimum.—2. No momentum is required to ensure the perfect action of the various parts, as (owing to the weight of the load assisting in the detaching) the jaws will fly open and release the shackle-pin the moment the securing point has been reached, without reference to the speed at which detachment takes place.—3. In the double event of the hook being pulled through the ring, were so far to cut the copper pins, and to drop the clamps, and the engine then to be reversed, the jaw-hooks will then open into the recess of the attaching ring, and the load will remain in safety, as if a complete pull through had taken place. Some appliances are not provided to meet a contingency such as this, which, though not probable, is possible, and has taken place within the knowledge of the inventor of this appliance.—4. In this hook the pin of the shackle or D-link is in the most favourable position for immediate release, and future wear will find it as ready for action as when started. In some past appliances this pin rests in a more or less arched chamber or slot, which as time goes on wears, and the rope and gearing have to stand the additional strain of having to lift the pin or pin out of this deepened recess in case of over-winding. At a slow speed, with little or no momentum to assist in the release, the strain becomes a serious item.—5. It will be observed that the upper edge of the ring is curved to the section of the jaw-hooks, when opening by this arrangement all shock is avoided.—6. In this hook, also, the points where the copper pins are sheared off are well within view, and the absence of this pin-end would be at once discovered, where, as in some apparatus, the pins being sheared internally, the pin ends remain in three places, as though no shearing had taken place. It remains only to observe that this hook is simple in construction, effectual and certain in its action—by virtue of the weight of the load—so not liable to be come deranged or get out of order; that it is well made is proved at the Government Proof House, up to double the strain for which each hook is sold respectively, and that the cost is very moderate.

It is now attached to two ropes, each working a 750 gallon water barrel (a load of 5 tons) from a depth of 70 fms. at the Kilton Ironstone Mines, near Saltburn-by-the-Sea, and on Messrs. Robson, Maynard, and Co.'s blast-furnace lift, near Redcar. There are also some 120 in use at the present time in the Newcastle and Durham district, as also a few in Wales. Being a North-Country patent, it has naturally been introduced there first. Most satisfactory accounts have also been received of the working of these hooks, as also of the stability and absence of appreciable wear of the copper pins.

In the course of a few weeks it is intended to have a public trial of this hook at a colliery in this immediate neighbourhood. Due notice will be given in the public papers, and it is hoped some of the practical mining engineers will be present, and express their opinions as gathered from its performance in actual use.

Mr. H. GIBBS exhibited and explained King's safety apparatus for the prevention of accidents by over-winding; and Mr. HILL, of the firm of Warsop and Hill, Nottingham, exhibited the Warsop Rock Drill, which has lately drawn much attention.

THE CHANDOR LIGHT.—At a *conversazione* recently held in Edinburgh Prof. Archer drew attention to a new and very important invention—the Chandor light—which really threatens the lucifer trade with extinction. The apparatus is, in outward appearance, a little tube 3 in. or 4 in. long, having at one end a revolving button which turns a screw, and at the other a minute angular point of metal, which also revolves, passing over a little orifice in the closed head of the tube. A continuous fuse, formed of a delicate strip of solidified collodion, with a ridge of hardened phosphorus on one of its sides, is slipped into the tube, and, once in position, can be moved upwards by the screw. By the same action which presses the upper end of the fuse against the opening at the top the metal point is turned upon the phosphorus, and a small portion of the collodion is thereupon ignited. When the apparatus is affixed to a gas-burner

only a very transient flash is needed for the purpose of ignition, and not more than a seventieth part of the collodion fuse is in that operation consumed. Where, however, the wick of a lamp has to be lit by the same means, a larger portion of the fuse, the thirty-second part, in fact, is burned. The apparatus is either portable or adapted to the uses indicated. If a lamp goes out it can be instantly re-lighted by the turn of a screw, instead of by opening the case, removing the chimney, and striking a lucifer match where, perhaps, large quantities of straw are lying about. The collodion fuse is so little liable to be effected by damp that it will ignite after having been immersed in water, and its action has never been known to fail. Being encased in a close-fitting chamber within the tube it cannot burn beyond the requisite point where its duty is discharged, and the cotton wick, or invisible spirit of gas, "starts into light and makes the lighter start."

THE HEMATITE ORES OF CUMBERLAND.

At the Manchester Geological Society monthly meeting, on Tuesday (Prof. BOYD DAWKINS in the chair), a paper by J. D. KENDALL, of Whitehaven, on "The Hematite Deposits of Whitehaven and Furness," was read. Mr. Kendall described the geological character of the districts in which the hematite ores occur, and said if a section were taken through each of those districts, on the line of dip, on an east and west line at Whitehaven, and on a north and south line at Furness, they would have the following ascending order of rock systems:—First, the silurian forming the base of both districts; then, resting upon these, the carboniferous rocks; and lastly, the permians. The formations making up these systems were also very much alike. This great resemblance in the geology of the two districts, of course, followed from the fact that the geological character of both was the result of a similar set of changes which appeared to have affected a very large area about the English lake country. In considering the main objects of the paper, it admitted of division into four parts—first, as to the form and geological position of the hematite deposits; secondly, their internal structure; thirdly, their origin, and lastly, their age. All the hematite of these districts was obtained either from the silurians or from rocks of carboniferous age. The latter deposits, however, were far the most important, the ore found in the silurian rocks being so very limited in quantity as to be scarcely worth working. Mr. Kendall entered largely into a description of the internal structure and mineralogical character of the ores in question, and said that when the deposits of the two districts were examined internally a difference presented itself quite as great as that in their form, and yet there was a resemblance no less striking than that in their positions. Speaking generally, the Whitehaven hematite was much harder and more compact than that found in Furness; for whilst in the former locality it had all to be blasted, in Furness it was chiefly got by the pick, except at Lindal Moor, Stank, and Askam, where the ore was not unlike that at Whitehaven, and was mainly blasted.

Treating of the origin of these splendid deposits of hematite, Mr. Kendall rejected the igneous theory—that is, their eruption in a liquid state from below into previously existing caverns and fissures—and said his impression was that the hematite was originally deposited as a carbonate, in which form it was thrown down, partly displacing the limestone and partly in previously existing caverns. The *modus operandi* probably was as follows:—Bicarbonate of iron in solution entering the numerous cavernous spaces and joints in the limestone would, by its contact with the carbonate of lime forming that rock, become decomposed, the carbonic acid in the bicarbonate of iron acting on the limestone. The result of the reaction would be bicarbonate of lime and carbonate of iron, the latter of which, being insoluble in water, would be thrown down, and bicarbonate of lime, being soluble, would be carried off in solution. Carbonate of iron would also be produced by the abstraction of some of the carbonic acid from the bicarbonate, through evaporation, into the caverns. The precipitated carbonate, however, thrown down would in course of time by exposure to the air and water that might pass through the joints and cavernous spaces in the limestone become converted into sesquioxide—the state in which it is now found. Both the above operations, to produce the carbonate, might frequently be going on at once in the same deposit; for instance, if water holding the bicarbonate of lime in solution found its way into a cavern part of the iron contained in the water might be precipitated by some of the carbonic acid in the bicarbonate being evaporated, and part by the remainder of that carbonic acid uniting with the carbonate of lime forming the sides of the cavern, and leaving the iron in the state of a carbonate, which, being insoluble in water, would be thrown down in the cavern. The former process might frequently be seen going on now in any coal fields where bicarbonate of iron in solution issuing out of the earth and becoming exposed to the atmosphere loses part of its carbonic acid by evaporation, and the iron is then thrown down as a carbonate. This eventually, by further exposure to the air, becomes converted into sesquioxide, and forms the ochreous sediment called canker, so common in water coming from coal fields.

The latter of the two operations mentioned above would, in all probability, extend for a considerable distance from the walls of the cavern into the limestone, the carbonated water finding its way by the joints. This would, of course, make the deposit very much larger than the original cavern, and so enable them to get over the objection sometimes raised that many of the deposits that had been found were much too large to have been formed in caverns. With regard to the age of the hematite deposits Mr. Kendall differed from Mr. Binney—who believed them to be of lower carboniferous age—and other authorities, and believed that they were deposited after the carboniferous limestone, but before a great part of the permians. Perhaps, as more facts were revealed in working the deposits we might arrive at their age more nearly than we could at present. In the meantime, he thought, there was no positive evidence to warrant them in saying more than that the hematite was younger than the carboniferous limestone, and older than a great part of the permians. Circumstantial evidence would, perhaps, lead to the conclusion that its formation was collateral with the coal measures.

In the discussion which ensued, Mr. J. AITKEN said that in order to account for the hematite deposits they must, in his judgement, suppose some natural forces to have operated in the districts where they were found which were not in operation generally.

Mr. DICKINSON expressed his belief that these hematite ores had been deposited simultaneously with the rocks in which they were found embedded. In no other way could their position—isolated in the midst of solid rock—be accounted for satisfactorily.

On the motion of Mr. PLANT, seconded by Mr. JOHN KNOWLES, the discussion was adjourned.

THE SUB-WEALDEN EXPLORATION.—Mr. H. Willett, the honorary secretary, reports that at a meeting of the Sub-Wealden Exploration, just held, the treasurer's report showed a balance in hand of 510l. 19s. 10d., besides over 1500l. conditional promises, the larger portion being for the extension beyond 1000 ft. Major Beaumont, M.P., and Mr. Gulland attended on behalf of the Diamond Boring Company, and stated that all their difficulties had arisen from their original mistake of attempting to increase the depth of the 9-in. bore, instead of beginning *de novo*; that although the obstructions might yet be removed, they had come to the conclusion that valuable time would be saved by commencing a new bore forthwith—they would undertake to do this to the depth of 1000 ft. (including lining tubes) for 600l.; and that, subject to the condition of being permitted to terminate the contract should unforeseen difficulties arise, they would undertake an additional 1000 ft. on certain terms mentioned. It was stated that the expenditure of 400l. for enlarging and lining to 1000 feet had already been authorised, and that 5-in. lining tubes passing through a 9-inch bore (Bosworth's portion), would be always liable to fracture or displacement. Although the sums already promised were mostly unavailable, yet, believing that the money would be forthcoming, Mr. Willett would be responsible as the contracting party. This fresh offer present considerable increased expectation of attaining the 2000 feet. It was, therefore, moved by Mr. John Evans, and seconded by Mr. R. Godwin-Austen,

and carried unanimously, "That the new contract of the Diamond Boring Company be accepted." The question was also discussed whether change of site was desirable, but it was decided to adhere to the present one. Some additional subscriptions were promised towards the fresh work, and Mr. Willett was authorised to apply to the Royal Society for an additional grant, and to make known the change of contract to the various subscribers. He anticipates that the 1000 feet will be completed in about five months—a shorter period than has been occupied in bobbing and fishing for the broken rods—and in a postscript to his letter says that all persons anxious to contribute large or small sums "may hear something to their advantage" by applying to him.

STEEL CASTING AT SHEFFIELD.

The new trade of steel casting has made rapid progress in this country since its first introduction at Krupp's great Prussian works; and as cranks and all other important parts of steam-engines and other machinery can now be run out from the crucible of the best material, where tensile and tortuous strains and wearing surfaces are excessive, this kind of metal is invariably preferred. The manufacture of crucible-steel castings is a branch of the Sheffield steel trade of modern development, and promises to become of great magnitude. Krupp, of Prussia, was one of the first to make large castings in steel, but has long since been surpassed by Messrs. Vickers, of Sheffield, who may be considered the founders, &c., by originating and manufacturing all kinds of steel bells, and are still the makers of the largest sized castings, by what is known as the "Siemens-Martin steel process," and though the Siemens-Martin "elephant," or "tank," or "bath" furnace, for it is known by these several names, does well enough for large castings, and is in operation at Swansea, Glasgow, Dowlais, and on the Continent, it is used principally for rail-making and tuiere purposes, but it has made little progress at the "capital of steel," as the produce cannot be relied upon, being too irregular in temper as compared with ordinary crucible steel, and for best steel 95 per cent. of Sheffield steel manufacturers still adhere to the old method of melting (50 lbs.) steel in crucibles, by which process all the best cast-steel is now made, and which has gained for Sheffield crucible-made steel its excellence of quality and world-wide reputation.

To show the increasing importance of this trade, Messrs. Hadfield's Steel Foundry Company, Newhall, Sheffield, some years since erected large works, premises, and plant, covering a couple of acres, with machinery and improved mechanical appliances for the special manufacture of smaller steel castings; and as they devote themselves entirely to this speciality, and claim a special excellence in having secured sound castings in crucible steel from 1 lb. to several tons in weight, and also a superior method of treating their castings to any others, their success being such as to necessitate the erection of new works to meet their large and increasing trade, they possess one of the most complete and well arranged foundries of the kind. It is really surprising to learn how many and varied are the uses these castings are applied to. From reaping-machine fingers to screw-propellers for steamships seems a great step, but from hydraulic cylinders to colliery, tram, and railway wheels seems greater. Pinions, engine-shafts, cylinders, ploughshares, horn-blocks, and axle-boxes may be mentioned, and will give some idea of the purposes to which they are being applied. In fact, crucible steel castings are fast replacing metal work and wrought-iron forgings, their superior qualities, great tenacity, strength, and lightness giving them special advantages over other metals. It may also interest our colliery friends to learn that considerable quantities of light rolling wheels are being extensively introduced—over 100,000 steel wheels having been manufactured last year by this firm alone.

CORNISH PUMPING ENGINES.—The number of pumping-engines reported for Dec. is 16. They have consumed 2224 tons of coal, and lifted 16,400,000 tons of water 10 fms. high. The average duty of the whole is, therefore, 49,900,000 lbs., lifted 1 ft. high, by the consumption of 112 lbs. of coal. The following engines have exceeded the average duty:—

Crenver and Wheel Abraham—Sturt's 90 in.	Millions	51.6
Ditto ditto —Willyams's 70 in.		57.9
Doleath—85 in.		56.4
West Basset—Grenville's 70 in.		53.1
Ditto —Thomas's 60 in.		61.9
West Tregus—Richard's 70 in.		53.3
West Wheel Seton—Harvey's 85 in.		55.8

NEW ELECTRIC TELEGRAPH APPARATUS.—An improved instrument for receiving messages by sound has been invented by Mr. J. Neale, electrician to the North Staffordshire Railway Company, and it is considered quite possible that if the Government and railway telegraph engineers adopt this beautiful little apparatus the old single needle instrument will soon become a thing of the past. It may be mentioned that the apparatus generally used for railway purposes is known as the single needle telegraph, a modification of Cooke and Wheatstone's double needle instrument. The message is read from the needle, which is deflected, and so many movements to the left or right signify the letters of the alphabet. This apparatus is very trying to the eyesight, and as the needle is a taper which makes a metallic point on one side, and a wooden point on the other, thus producing two distinct sounds. The instrument is enclosed in a hollow case, which improves the tones produced by the taper. The Morse code is adopted, and a telegraphist can sit at the opposite end of the office and write the message without casting a glance at the apparatus. No excuse can be offered for inattention, as the call signal can be heard outside when the office door is closed. We wish Mr. Neale success of his invention, which must prove a great boon to railway companies and telegraph clerks. —*Staffordshire Times*.

SMELTING.—Messrs. HASELTINE, LAKE, and Co. have patented (for Mr. H. Essex, of Meadville) some improvements in hot-blast apparatus for smelting and other like purposes. The object of the invention is to furnish an apparatus for producing and supplying a hot-air blast for smelting or other purposes; the said invention consists in an air heating and forcing vessel, or two or more of apparatus, provided with suitable openings for the entrance of cold air, for the exit of waste hot air, and for the exit of hot air under pressure toward the place where the blast is required. It also consists in the construction and combination of parts.

STEAM PUMPING AND BLOWING MACHINERY.—According to the invention of Mr. T. MACKENZIE, of Wednesbury, the steam-cylinder, blowing-cylinder, and pump-cylinder are in the same line, one piston rod serving for the three cylinders. The steam-cylinder is placed between the blowing-cylinder and pump-cylinder, the valve gearing of the steam-cylinder being worked by plugs or rods, which are struck by the piston of the said cylinder. A condenser is combined with the pump-cylinder, which condenser is put in connection with the exhaust pipe of the steam-cylinder, and which, by effecting the condensation of the waste steam, materially increases the power of the steam-cylinder. The condenser may be applied to steam pump-cylinders of various kinds, and the combination of steam-pump and condenser may be used apart from the blowing apparatus.

THE MECHANICAL EQUIVALENT OF THE HEAT UNIT.—The dynamic equivalent of one thermal unit is one of the most interesting, not to say important, factors just now in all mechanics, theoretical or applied, and yet it seems to be little understood. In the first place no heat whatever is necessarily used or absorbed by a gas in simply expanding. Soule showed as long ago as 1845 that unless a gas during expansion operates some outside work besides expansion, such as lifting the atmospheric column, its temperature and its quantity of heat undergo no change. This, moreover, is the basis of the whole mechanical theory of heat. Your correspondent, on page 400, in November "Eclectic," has properly calculated the amount of heat employed in overcoming the atmospheric pressure, while a certain volume of air expands a certain amount, and from that has shown, as hundreds have done, that the theoretical equivalent deduced from the consideration of sp. heats, is very near Soule's equivalent determined by experiment; the difference being only a few foot-pounds, 5.2, according to his numbers. If that air had, however, expanded into a vacuum, the variation of volume and pressure would not have affected the apparent sp. heat of air—there would have been no depression of temperature, no latent heat absorbed as some say. The last expression, however, is one which no authority will make use of at the present day, without at least explaining that it is, like the denomination force of inertia, living force, and some other terms, entirely inappropriate and even deceptive. The subject would lead to a volume. I will, therefore, only refer to another loose phrase which sometimes tends to fighting shadows—"The dynamic equivalent of heat." There is, in fact, no dynamic equivalent of heat any more than there is of gravity—both would be infinite to us; there is, however, a mechanical equivalent of a unit of gravity—one foot-pound, or one kilogramme, according to the units of weight and space which are assumed. There is also a mechanical equivalent of a unit of heat—say, 772 foot-pounds or 425 kilogrammes, and both mean the total mold work, independent of molecular, that a certain quantum of the force can effect operating over a certain space; to explain more fully, one unit of weight acting through 1 foot space can lift 1 lb. 1 ft., and one unit of heat acting through 1 ft. space can lift 772 lbs. 1 ft.—FRANCIS L. VINTOR, C.E., Van Nostrand's Engineering Magazine.

Original Correspondence.

ROCK-DRILLS.

SIR,—We ask space to reply briefly to the note of "D. E." in last week's *Mining Journal*. His former letter in the *Journal* of Jan. 2 escaped our notice on account of absence from the country. The writer must presume that the inventors of rock-drills are wealthy capitalists who can put down the plant for mining enterprises in various localities, give the use of it for six months, and then negotiate a sale or take it away. If the owners of mines have not sufficient faith in the applicability of the system, or intelligence to appreciate its advantages, and to furnish the capital, who will furnish it? If he would notice the progress making in other countries in the introduction of boring machines and air-compressing engines for driving the same and ventilating purposes he would see that boring machines are making their way, and might conclude that more acceptable offers were to be had than he has made.

As to revolutionising the system of mining in this country, we fear it would not be accomplished even by accepting the proposition of your correspondent. We may state that the mine where boring machines have been longest in use in this country, now nearly five years, is precisely a lead mine. The machines used at first were greatly inferior to the present machines, and yet they have been successful over hand labour from the beginning. These machines are now brought to the greatest perfection and simplicity of application and use, and there exists no sound reason for not employing them in the mines of this country as well as abroad.

London, Jan. 28.

McKEAN AND CO.

CAPE COPPER MINING COMPANY.

SIR,—“Looker-On,” in his letter in the *Mining Journal* of last Saturday, says, “he fears there is little consolation to be extracted from the increased tonnage, for if any increase in the money value should be the result the continually increasing working expenditure will probably more than absorb it;” whereas the Chairman, at the last annual meeting, stated in reference to profits, “What the profits will be depends upon two things—the quantity of ore raised, and the price.” Now the quantity raised from the principal mine has increased from 659 tons in January, 1874, to 860 tons per month for the last three months of 1874, of which advices have been received, and the price from 15s. 6d. in July, 1874, to 16s. 6d. in January, 1875. I leave your readers to judge which statement is likely to turn out correct.—London, Jan. 29. ANOTHER LOOKER-ON.

CAPE COPPER MINING COMPANY.

SIR,—“A Looker-On” in the *Journal* of last Saturday objects to my estimate of 27l. per ton as an average for the ore coming forward. I based my calculation on the sale of Dec. 22, which was 27l. 3s. 8d. all round, at a produce of 32 per cent., and that was when the copper market was in a “declining state,” and as the produce per last monthly return was 33 and 34 per cent. from the Ookiep and Spectakel Mines respectively (and which proves the produce is increasing instead of decreasing, as your correspondent wants to make out).

“A Looker-On” endeavours to revive the discussion as to the wisdom of continuing the present dividend of 1l. per quarter, but as the matter was so fully gone into at the last annual meeting at the instance of the Stock Exchange element there present, it would be great presumption on my part to be a party to the revival of it, as I doubt not a very great portion of the “floating liabilities” objected to have been paid off, in addition to the debenture debt of 70000l., by the proceeds of the enormous sales made the last six months. The called-up capital (20,000 shares of 7l. each) being so small, I am of opinion the directors are acting wisely in keeping the reserve fund of 58,397l. in their business, instead of investing it at 3½ or 4 per cent. As a trading company the larger the capital invested the greater the profits.

On the subject of the increased tonnage of copper ore I beg again to refer to the last monthly return as to ore raised, which from Ookiep is given at 33 per cent., which shows an increase in the produce as compared with previous returns, and as to the statement that “carriage to the port and freight to England being fearfully heavy per ton on this company's ores,” let us examine the cost. The chairman, at the meeting in July, stated that the cost of transit of ore by the railway was 9d. per ton per mile in 1873. I do not know what the cost to the railway from the mines is—a distance now about 12 miles. It cannot be very much, and the freight from the port to England we know is from 25s. to 30s. per ton. I am satisfied I am within the actual cost when I put all charges down at 5l. per ton on the ore laid down at Swansea.

As to the increasing charges, the largely increased yield of ore of greater percentage will much more than cover them, as the difference between working the 60 and 80 fm. levels cannot be considerable when we take into account the facilities that now exist for drainage, &c., by the improved pumping and other new machinery put up. As to the deepening of the mine below the 80 fm. level, I hope the necessity for it will arise, but I very much doubt it, for when the 80 fm. level is driven I am confident a vast quantity of copper ore will be developed, the removal of which will tax all the energy of the company for very many years to come. “Looker-On” states the main shaft has been driven through unproductive ground. This is true; partly in consequence of its having cut the flookan course, and the fact that the ore ground throughout the mine has dipped east by south, but the levels will follow the ore from the shaft. The expense of sinking the latter is now at an end, and the driving of the 80 fm. level will add to the profits of the company. As to your correspondent's statement that the drivages of the 68 fm. level had rapidly fallen off, why, Sir, the superintendent, reporting on Dec. 31, states:—

“The stopes throughout the mine (Ookiep) are, on the whole, looking very well, especially the one in the 68, south-east from No. 13 winze. In some places where we are stopping and driving in the 48 and 63 we find the productive ground extending laterally in a very satisfactory manner.”

And, again, Nov. 30, 1874 (being the last report received), Capt. Tonkin says:—

“The stopes throughout the mine (Ookiep) have yielded the estimated quantity of copper ore, and they are at present on the average looking much the same as last reported.”

I do not know anything of the mines your correspondent speaks of, but I do know that Don José Tomas de Urmeneta, by the introduction of improved machinery into mines in the Tomaya district in Chili, works at a depth of 200 fms. 30 per cent. ore, and by which he has amassed an enormous fortune. It is estimated in one year by one copper mine alone he cleared upwards of a million dollars. I believe Ookiep is second to no known copper mine, and of the extent of its richness no one now can form a conception. I assert the present dividends of the Cape Copper Mining Company will continue for six years, but that if the present prices continue, or even 15s. per unit, the future dividends, say from 1876, must be considerably increased. In a future letter, with your permission, I shall give you my data.—London, Jan. 25. AN INVESTOR.

[For remainder of Original Correspondence see this day's Supplement.]

PATENT COTTON GUNPOWDER COMPANY.—The progress hitherto made by this company has been most satisfactory, and they are now in a position to supply their blasting powder in any quantity. Some public trials to demonstrate its value are to be made at Faversham on Wednesday next, and there can be no question that as soon as the true value of the powder becomes known it will be very generally adopted. The entire process of manufacture is so harmless that every part of the works can be gone through without fear or hesitation. Men and women work in perfect safety, and the powder made is of high power, innocuous, safe, and only to be exploded by special means, which the company itself supplies.

PUMPING ENGINES.—Mr. W. WALKER, Newton Moor, Chester, engineer, proposes to employ a double-ended piston having a cylindrical part working in a partition piece. The steam is admitted into the annular space around the cylinder piece, and is then expanded into the larger steam space. As the piston works to and fro communications are effected by means of passages in the piston cylinder and in the main cylinder for the flow of steam from end space in the valve box into the exhaust passage to effect the movement of the valves.

THE ROCK-BORING CONTRACT COMPANY.

DARLINGTON'S PATENT ROCK-BORING MACHINERY.

OFFICES,—2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.

FOR TUNNELLING, DRIVING LEVELS, CROSS-CUTS, AND SINKING SHAFTS.

THE STEPHEN ROE DIFFUSIVE DAYLIGHT REFLECTOR COMPANY (LIMITED).

This company is now fully registered, and in full operation, doing at present a remunerative business, and capable of great extension.

25 per cent. dividend may be fairly anticipated.

Messrs. CUNLIFFE, BROOKS, and CO., King-street, Manchester.

Messrs. SUTTON and ELLIOTT, 11, Brown-street, Manchester.

Messrs. NICHOLSON and MILNE, King-street, Manchester.

Prospectuses and Forms of Application, with Testimonials, may be had, and shares taken up, by applying to the Bankers, Solicitors, Auditors, or to the Secretary, Mr. PHILIP GRANT, at the registered office of the company, 60, Market-street, Manchester.

A limited number of shares only remain to be taken up for the present.

Responsible agents wanted in all large towns.

THE CORSICAN MINING COMPANY (LIMITED).

Registered under the Companies Acts of 1862 and 1867.

Capital £50,000, in 10,000 shares of £5 each.

Of which 5000 shares have been allotted to the vendors, and the present issue is limited to 2000, leaving 3000 in reserve, to be dealt with as may hereafter be found advisable.

Terms of subscription:—10s. per share to be paid on application, £2 on allotment, and the balance of £2 10s. per share in two months thereafter.

BOARD OF DIRECTORS.

Dr. THOMAS HENRY COOPER, The Limes, Slough, Bucks, Medical Officer to the Great Western and Metropolitan Railway Companies.

CHARLES WILLIAM SALIZ DURANTEAU, Esq., Civil Engineer, 105, Camden-road, London, N.W.

JOHN OLIVER SURTES, Esq., The Chestnuts, Chertsey, Director of the Masonic and General Life Assurance Company (Limited).

GRAINGER TANDY, Esq., Lynton House, Anerley, Surrey, S.E.

A. TORKINGTON, Esq., Moorgate, Rotherham; and 4, Colebrook Row, N.

THE CONSOLIDATED BANK (LIMITED), Threadneedle-street, London, E.C.

Messrs. GREGORY FRERES, Bastia, Corsica.

B. H. TROMP, Esq., 18, Essex-street, London, W.C.

Messrs. PRICE, HOLYLAND, and WATERHOUSE, 13, Gresham street, E.C.

OFFICES—33 AND 34, METROPOLITAN BUILDINGS, QUEEN VICTORIA STREET, LONDON, E.C.

PROSPECTUS.

The Corsican Mining Company (Limited) has been formed to purchase the lease of a valuable mining concession at Linguizzetta, in the island of Corsica, and to develop the copper mines therein.

The concession includes upwards of 1600 acres, chiefly mountain, with several streams of water. It is situated near the Government road leading to Bastia, one of the chief towns and ports in the island, and about a mile from this road is the sea shore. It is held under a lease granted by the original Concessionaire, under a decree of concession from the French Government. The royalty to be paid is unusually light, being at the rate of only 2 francs per ton for every ton of mineral extracted and exported.

As the mineral is extracted by open quarrying on the side of the mountain, no lifting or pumping machinery is required; the working cost will, therefore, be extremely small.

The workings, although hitherto conducted on a limited scale, have given results which fully justify the belief that large profits will be realised from the contemplated developments and extensions; indeed, from the indications in various parts (all similar in appearance to the quarry already opened out), the quantity of ore extracted will be limited only by the number of miners employed. Labour is cheap, and the supply of efficient men abundant.

The property was recently inspected by Mr. John Darlington, of 2, Coleman-street Buildings, London, whose experience in copper mining is well known. His report, containing an accurate description of the workings, states that the quantity of copper stone therein available is practically unlimited, and concludes as follows:—

“When, therefore, it is considered that the stone can be broken cheaply and in large quantities, that the operations are not beset by the drawbacks incidental to shaft and level mining, it is reasonable to expect that remunerative results will attend an enlarged scale of operations, and that the property may be rendered one of a permanent character, and justify the amount of capital requisite for its extension.”

Samples of the mineral, duly authenticated as extracted from the mine, have been assayed by Captain M. Rogers, of Penclawdd, South Wales, with the following results:—

No.	Produce...	Price per unit at Swansea...	15s. 6d. = £48 7 0
No. 1	Produce...	Price per unit at Swansea...	15s. 6d. = £48 7 0
No. 2	Produce...	Price per unit at Swansea...	15s. 6d. = £48 7 0
No. 3	Produce...	Price per unit at Swansea...	15s. 6d. = £48 7 0

(Since this assay was made the price of copper has risen considerably.)

Similar samples have been assayed by Messrs. Johnson, Matthies, and Co., with about the same results.

As the copper is found chiefly in the native or metallic state, it is intended to erect on the spot such plant and apparatus as will enable the company to reduce it into ingots, so as to realise the highest price in the home markets, and save very largely in the cost of freight, &c.

An agreement has been entered into with the lessees to acquire and purchase from them all their right and interest in the mining property, together with all the plant, utensils, apparatus, tools, and the ore at present extracted and lying at the mine, for 5000 fully paid-up shares of the company, and 5000l. in debentures, bearing interest at the rate of 5 per cent. per annum, redeemable in three years.

The company took over the property as from Sept. 1 last, together with 298 tons (more or less) of mineral extracted and ready for treatment, and which have been estimated to produce over 4000l. when reduced to metal. This quantity is the result of eight months' working by fifteen persons, at a cost of about £1200; and as 150 persons can at once be put to work, at the same ratio they would produce £40,000 worth of copper in the same time; and, taking the cost of production at one-half of that sum, there would be left £39,000 as clear profit, or about 60 per cent. on the total issue of shares.

Referring to Mr. Darlington's exhaustive report, to the results already obtained, and to the fact that the property can be successfully worked by quarrying—avoiding thus the great cost of mining by means of shafts and levels—the directors have the greatest confidence in recommending the undertaking to investors as one of more than ordinary promise; and, being free from the usual mining difficulties and uncertainty, in their opinion it cannot fail to realise large profits.

For the formation of the company no promotion money has been or will be paid, and the amount of the present subscription will be entirely devoted to the development of the mines and other legitimate expenses, the Articles of Association providing that the directors receive no remuneration until after the shareholders have been paid 10 per cent. dividend.

The only contract entered into is as follows:—An agreement, dated the 20th July, 1874, between Grainger Tandy, and others, of the one part, and L. H. Cuzner, on behalf of the company, of the other part, for the purchase of the lease, as stated above; which agreement, together with the copies of the lease and other documents, plans, and specimens of the ore, may be seen at the offices of the company.

Applications for shares on the annexed form may be made to Mr. T. R. Comyn, 31, Threadneedle-street, E.C.; to the secretary, at the offices; or to the London bankers of the company; but no application will be entertained unless accompanied with a deposit of 10s. per share on the number applied for. If no allotment be made, the deposit will be promptly returned without any deduction whatever.

FORM OF APPLICATION FOR SHARES IN

THE CORSICAN MINING COMPANY (LIMITED).

To be retained by the Bankers.

To the directors of the Corsican Mining Company (Limited).

GENTLEMEN,—Having paid to your bankers, the Consolidated Bank (Limited), Threadneedle-street, the sum of £ , being 10s. per share on my application for shares of the Corsican Mining Company (Limited), I request you will allot me that number of shares, and I hereby agree to accept the same, or any smaller number that may be allotted to me, and to pay the sum of £2 per share on allotment, and the balance of £2 10s. per share in two months thereafter.

Name in full

Address

Date

Profession (if any)

THE CORSICAN MINING COMPANY (LIMITED).

Bankers' Receipt.

(To be retained by the applicant, and exchanged after allotment.)

Received of the sum of £ , being a deposit of 10s. per share

on shares in the above named company.

For the CONSOLIDATED BANK (LIMITED).

THE PORT PHILLIP AND COLONIAL GOLD MINING COMPANY (LIMITED).

Incorporated by Royal Charter, and under the Companies Acts of 1862 and 1867.

Notice is hereby given, that the ORDINARY GENERAL MEETING of the Shareholders of this company will be HELD at the Cannon-street Terminus Hotel, Cannon-street, in the City of London, on THURSDAY, the 4th day of February, 1875, at Twelve o'clock precisely, in pursuance of the Deed of Settlement, to receive the directors' report and the accounts, to elect retiring officers, and to transact such other business as may be necessary.

By order, J. W. PURCHASE, Secretary.

Offices, 30, Moorgate-street, London, E.C., Jan. 14, 1875.

N.B.—The Transfer-books of the company will be closed from Wednesday, the 3d February, until Thursday, the 18th February next, both days inclusive.

VICTORIA (LONDON) MINING COMPANY (LIMITED).

Notice is hereby given, that the ORDINARY GENERAL MEETING of the Shareholders of this company will be HELD at the Cannon-street Terminus Hotel, Cannon-street, in the City of London, on THURSDAY, the 4th day of February, 1875, at One o'clock in the afternoon precisely, for the following purposes:—

To receive and consider a report of the proceedings of the company, and a statement of the accounts, since the last ordinary general meeting.

To elect directors in the place of Messrs. Henry Moor and John Randal MacDonnell, who retire by rotation, and offer themselves for re-election.

To elect auditors for the ensuing year.

To declare a dividend.

By order, J. W. PURCHASE, Secretary.

Offices, 30, Moorgate-street, E.C., 14th January, 1875.

N.B.—The Transfer-books of the company will be closed from Wednesday, the 3d February, until Thursday, the 18th February, both days inclusive.

RAILWAY CARRIAGE COMPANY (LIMITED).—

ESTABLISHED 1847.

OLDBURY WORKS, NEAR BIRMINGHAM.

MANUFACTURERS OF RAILWAY CARRIAGES AND WAGONS, and EVERY DESCRIPTION OF IRONWORK.

Passenger carriages and wagons built, either for cash or for payment, over a period of years.

RAILWAY WAGONS FOR HIRE.

CHIEF OFFICES,—OLDBURY WORKS, NEAR BIRMINGHAM.

LONDON OFFICES,—7, GREAT WINCHESTER STREET BUILDINGS.

THE BIRMINGHAM WAGON COMPANY (LIMITED).

MANUFACTURE RAILWAY WAGONS OF EVERY DESCRIPTION, for HIRE and SALE, by immediate or deferred payments. They have also wagons for hire capable of carrying 6, 8, and 10 tons, part of which are constructed specially for shipping purposes. Wagons in working order maintained by contract.

EDMUND FOWLER, Sec.

WAGON WORKS,—SMETHWICK, BIRMINGHAM.

. Loans received on Debenture; particulars on application.

TYNE CAST MALLEABLE IRON COMPANY,

WORKS: TEAMS, GATESHEAD;

LONDON OFFICES: CHANDOS CHAMBERS, ADELPHI, W.C.

MANUFACTURERS OF ALL DESCRIPTIONS OF

MALLEABLE IRON CASTINGS, delivered in London, carriage free.

Minimum dividends of ten per cent. per annum guaranteed for the next three years, payable quarterly on the A fully-paid preference shares.

THE BRENTWOOD BRICK AND COAL COMPANY (LIMITED).

Incorporated under the Companies Acts of 1862 and 1867, whereby the liability of each shareholder is strictly limited to the amount of his shares.

No liability whatever to holders of fully paid shares or share warrants.

All shares rank alike after the dividend of 10 per cent. is paid on the A shares.

Capital £25,000, divided into 12,500 shares of £2 each.

(With power to increase to £50,000.)

6250 A fully paid preference shares, £2 each, with guaranteed dividends of 10 per cent. per annum for three years: £1 per share on application, and £1 per share on allotment.

6250 ordinary shares of £2 each; 5s. per share on application, 10s. on allotment.

Calls not to exceed 5s. per share, at intervals of not less than two months.

TRUSTEES.

T. S. PICKFORD, Esq.

W. SHEPPARD, Esq.

DIRECTORS.

EDWARD ROWE, Esq. (Messrs. Rowe and Co., Merchants), Brentwood, Essex.

W. WHITE, Esq., Finsbury-place, E.C.

T. S. PICKFORD, Esq., Rood-lane, E.C., Merchant.

W. SHEPPARD, Esq., Hertford.

Capt. H. DYKE MARSH, Hertfordshire House, Coles Hill, Herts.

BANKERS.

R. W. STACPOOLE, Esq., Plinners' Hall, Old Broad-street.

AUDITORS.

STUART AND CO., Moorgate-street, London, E.C.

SECRETARY—Mr. E. MILLER.

OFFICES—21, ST. SWITHIN'S LANE, E.C.

This Company has been formed for the purpose of purchasing and carrying on a large commercial undertaking, situated at Brentwood, in the county of Essex, the soil of which consists of a valuable deposit of fine plastic clay, well adapted for the manufacture of bricks, tiles, pipes, &c.; not only on account of the superior quality of the material itself, but also on account of the great advantage which the site occupies for the carriage of goods.

The area of the property is about 23 acres, 2½ acres of which are occupied by the railway sidings, the great value of which cannot be over-estimated, it being the only point for the supply of coal for this greatly increasing town.

The quality of the clays, of which there are several varieties, is excellent and almost inexhaustible. Many millions of bricks have already been made, which for colour and hardness cannot be surpassed by any fields trading with the London market.

The property occupies a most favourable position on the main line of the Great Eastern Railway, with two sidings. These private sidings, running direct into the works, afford great facilities for loading and unloading in connection with the works. There is also by this means an excellent opportunity presented for the purchase of coals, chalk, breeze, &c. Sand of superior quality is already on the ground; ready access to the London market is also thus obtained, where these bricks are in great demand. Many fields in this neighbourhood are exhausted, or closed, or have not equal facilities of transit.

The small cost of freight, 5s. per thousand, enables them to be placed in the London market to great advantage.

The qualities desired in making bricks for building purposes may be thus enumerated—soundness, hardness, regularity of shape, uniformity of size and colour, facility of cutting.

Success in obtaining these various qualities has been found to depend chiefly on the proper selection of brick earths and their judicious preparation, before commencing the actual process of brick making even more than in the careful drying and burning of the bricks. All other operations may be considered of minor importance.

The principal articles required to be mixed with clay for the purpose of making bricks are lime and sand, and from the report accompanying the prospectus it will be seen that not only is the chief material of a very superior quality, but the opportunities and advantages of easy access to the component parts are unusually important.

It is a well-ascertained fact that bricks, as an article of commerce, are so much in demand that no thought of being able to glut the market can be reasonably entertained, and consequently an article bearing qualities of an extraordinary description with respect to lightness, strength, and cheapness will take an unrivalled position.

In this undertaking there is no hidden element to deal with; there is no uncertainty in the character of the works, which lie on the surface; and calculations which are plain and simple foreshow the result of the company's operations.

The contract for the purchase of the property is in accordance with an agreement made between Edward Rowe, of the one part, and John Robert Banner, Esq., of the other part, dated 16 October, 1874.

Agricultural and many other industrial pursuits, shipping, &c., only admit of credit being taken annually, half-yearly, quarterly, or monthly, but in this investment the books will be kept and the accounts posted, so that the stock and profit will appear weekly, preventing irregularities and producing complete information for shareholders.

The company, it is calculated from practical data, will be enabled to manufacture a large quantity of tiles, also bricks at the rate of upwards of 30,000,000 per annum, and at a cost of about 20s. per thousand, which will realise at least 10 to 15 per cent. profit.

This undertaking is absolutely free from anything of a speculative nature. The trade is done principally for cash. The cost of manufacture and the selling prices taken are upon a moderate and fixed basis, and cannot vary except in a slight degree, thus the profits are ascertained with unusual exactitude.

The directors beg to call attention to the important fact that the shareholders at once enter into possession of an immediate dividend-paying property—there will be no waiting an indefinite period for returns, as the business is now in full working order, and capable of returning dividends from 10 to 20 per cent. on the capital invested.

Memorandums and Articles of Association, and copies of contract, can be seen at the solicitor's office.

Prospectuses, plans, reports, &c., can be obtained at the company's offices, 21, St. Swithin's-lane.

N.B.—Two tons and upwards of coals would be supplied to shareholders in any part of London, at whatever the cost actually is to the company; thus a great advantage would be gained by subscribers, and all coals are thoroughly screened before leaving the depot.

FOREIGN MINES.

EL DORADO GOLD MINING COMPANY.—A meeting was convened for Monday, but there was not sufficient shareholders present to form a quorum. An adjournment to Feb. 3 was agreed to.

CHICAGO SILVER.—At a meeting of the directors held on Wednesday it was resolved to make a payment on account of dividend at the rate of 4s. per share.

ST. JOHN DEL RIV.—Rio, Jan. 22: Produce, 11 days (first division) of Jan., 12,750 lbs. Profit for the month of December, \$400. The cost being 400. above the average.

DON PEDRO.—Telegram: Rio de Janeiro, Jan. 22: Produce for the month of December, 7200 lbs. Profit, 600. Produce cleaned up (first division, January), 2650 lbs.

SAN PEDRO.—R. M. Kito, Dec. 17: I am sorry to say we are not making the progress in bringing up the machinery that we anticipated; the boiler is on the road about 5 leagues from here, with one of the iron bands of the hind wheels of the car broken; the carrier arrived this evening, and said they were obliged to take it down to Chancal to get it repaired; we hope to get the boiler here about the latter part of next week, and to get all the machinery delivered on the mine about the middle of January. Mine Report: New Shaft: The water is being kept 14 metres below the 135 fm. level. I have again set a tribute pit in the bottom of the 47, to three men, and have also got twelve men employed taking out low-quality ores from the burrows, all at ½ tribute. I think, with the present price of ores, it will greatly assist in paying merchants' bills, &c.—Cuba Mine: A cross-cut driving south of east, by two men; the ground is favourable, but there are not such good indications for copper as last reported. A level driving north, by one man, is in very good strata for copper. A level driving south, by one man, is producing good stones of ore. Santa Helena and San Antonio Mines are being prosecuted on a small scale, which I hope in a short time to work effectually.

RICHMOND CONSOLIDATED.—Cablegram from the mine at Eureka, Nevada: Hall, London. Week's run, \$40,000.

BLUE TENT CONSOLIDATED HYDRAULIC.—Telegram from the superintendent: We have made a partial clean up on the Enterprise claim, after a run of 18 days; the gross returns are \$6000.

C. W. Foster. Jan. 6.—Since the date of my last, Dec. 24, I have to report that the extremely cold and clear weather has somewhat diminished our supply of water. Our own ditches are furnishing none, or next to none, and the South Yuba Canal Company less than half the quantity we usually obtain from them; we are, however, washing every moment that water is obtainable, both at South Yuba and Enterprise claims, and considering the scarcity of water are making splendid progress. We are washing only by daylight, somewhat less than half the time. The water season commenced unusually early, and promised to be a very long and favourable one. This promise may yet be redeemed; it is not too late. The want of water for full operations has, of course, postponed our clean up on Enterprise. We now intend to clean up about the 15th inst.

ANTIOQUIA (Frontino).—The directors have received advices, dated Dec. 12, accompanied by a remittance of 78 ozs. of gold dust, valued at 250. 17s. 5d.

MINERAL HILL.—Mr. Oakes, the superintendent at the mines, writes under date Jan. 4: "The ore raised during the past week is 40 tons, of an average grade of \$50 per ton."

LONDON AND CALIFORNIA.—Telegram from the agents referring to the last clean up at the Original Amor Mine: Total receipts amount to \$18,420; yield per ton, \$30.71; December total expenses amount to \$7338.

BRAZILIAN CONSOLS.—The agent reports (Dec. 17) that the rains at Rumao and Macacos have been very heavy and caused some landslides, blocking up the water-course. The ground, however, is so universally arid that 90 ozs. of gold were obtained in clearing out the same. Several samples of 6 lbs. each, taken from main lode, yielded from ½ to ¾ ozs. coarse gold; this is a most encouraging trial, as the lode is more than 3 ft. thick, with regular walls, and improving rapidly. An adit has been commenced which will thoroughly drain this mine, and intersect the jacutinga formation at about 6 fathoms from surface. Very favourable returns are expected for the present month (January).

SANTA BARBARA (Gold).—Mr. Hilcke, manager, writes (Dec. 12) that the quantity of stone stamped during the month of November was 589 tons, yielding 1848 ozs. of gold, equal to 3.157 ozs. per ton. The size of the lodes throughout the mine remains as last reported, but in the adit and stopes below the adit there is a pleasing improvement perceptible both in size and quality. At the same time he reports that in consequence of successive floods the No. 4 stamps, which were nearly completed and ready to work, have been so much injured as to render their removal to a new position necessary; this will occasion some delay in getting them to work, and entail a considerable loss on the company. The expenses for November were 1051. 4s. 6d.; less expended on new works, stamps, &c., 186. 19s. 9d.; total, 864. 4s. 9d. Value of 1848 ozs. gold, at 8s. 6d. per oz., 756. 8s.; loss on month's working, 72. 16s. 9d.

MALPASO.—W. S. Welton, Dec. 14: Water Supply: During the past month there has been almost continued rain, and Cantavara has been running as much as 2000 inches of water; in fact this year has been very similar to 1871. I am happy to say that the Medina ditch has not suffered from the excessive rains. The old Malpasito ditch has, however, had a number of slides, and gives much trouble. Mine: The boulders mentioned in my last appear to be giving out, and the gravel is improving. We have not yet opened sufficient space to be able to turn round to attack the high banks, but hope to be able to finish our preparations for attacking the high banks during the present run.

COLORADO TERRIBLE LODGE.—Jan. 25: The agent's advice to hand this morning are dated Dec. 21. The agent's sales of ore were: To Judd and Crosby, 3 tons 687 lbs., 182 ozs. of silver, \$152.84 per ton—\$518.72; To Church, 3 tons 1452 lbs., 290 ozs. silver, at \$389.70—\$1129.80. One delivered to Dec. 20 (one week)—To Judd and Crosby, 1.135 lbs. second-class; To Church, 400 lbs. second-class. The mine foreman's weekly report contains:—"As you may judge from this report of mine the mine is looking exceedingly well." It was never looked better, and you can expect a good return from the mine for the month of January."

Jan. 28: We have received advice of the sale in Liverpool, yesterday, of the following ore:—No. 1, about 6 tons, at 143. 1s., ex City of Antwerp; No. 2, about 10 tons, at 54. 15s., ex City of Antwerp; No. 3, about 12 tons, at 72. 1s., ex City of Antwerp; No. 4, about 15 tons, at 82. 9s., ex City of Brooklyn; No. 5, about 4 tons, at 121. 13s., ex City of Brooklyn; No. 6, about 18 tons, at 64. 5s., ex City of New York; No. 7, about 4½ tons, at 151. 4s., ex City of New York. The gross value is nearly \$1500., and the charges are under 750., leaving 4000. The 6th shipment has arrived per steamship City of Montreal.

CHONTALES.—Telegram from the manager, in anticipation of the mail due on Feb. 14: Gold remitted by you this mail 256 ozs.; general average per ton, 3½ dwts.; profit past month, 75.

TOLIMA.—The directors have advices from the mines which report the estimated value of the November consignment of ore amounts to \$10,088, obtained at a cost of \$7124; thus showing a gross profit of \$2963, representing a sterling value of 494.

CHICAGO (Silver).—W. S. Godbe, Jan. 2: Since my respects of the 19th ult. the ore veins in both lower workings have widened somewhat, and in the left incline, owing to the tortuous course, at present the ore extraction is rendered so difficult that no increase in the output can be made. The ore raised during the past fortnight is 110 tons.—Furnace: Two stacks were running from Dec. 15 until Dec. 23, when both were shut down for needed repairs. Both will probably start again on the 10th inst. Ore smelted from Dec. 15 to Dec. 23, 622,825 lbs.; yielding of bullion, 237,384 lbs.

INDEPENDENCE (Gold).—According to the latest advices received from the mine, the 6th level, middle shoot, is being opened out in very good ore, whilst the eastern shoot continues to produce good paying quartz from stopes both above and below the 4th level. A good clean-up is expected for the present month.

MENZENBERG.—R. K. Roskilly, Jan. 26: Dickins Engine-Shaft: We have cut through the lode in the 45 fm. level cross cut, south of shaft, but the ground is more favourable for driving in the 45 fm. level than the 40 fm. level; we shall probably take down the lode next week, when it shall be fully reported on. In the 45 fm. level, west of cross-cut, on No. 1 lode, no change what ever has taken place in the lode, as the men have been engaged in clearing the level, and changing some of the timber. We shall, however, have this work completed by to-morrow, when all energy will be exercised, so as to push on this level west again. Monday next being our setting day for February I will send you a full report thereon.

UNITED MEXICAN.—Extracts of despatch from Mr. Edward Hay, Guanajuato, Dec. 24: In the mine of Jesus Maria nothing of interest has occurred. The ore sent to the reduction works was nearly the same in quantity and quality as in former months, and the business sales have been rather better, notwithstanding the holidays in the month of December. In the new concern the work in Santa Elodia has been carried on but slowly, owing to the great heat. A wall has been passed parallel to the course in which the lode ought to run. In the end, west of the adit, loose ground has again been passed through, and the work has been stopped till it can be timbered and secured. The appearances have improved, and traces of silver to the extent of 1-15th marc of silver, with a trace of gold per ton, have been taken out. A block of mountain rock has again been found traversing the vein, but at the latest date it did not present the same barren appearance as when first discovered, and the pintas (appearances) already mentioned were found above and below it.

THE EMMA SILVER MINE.

A circular has been issued to the shareholders of the Emma Mining Company, informing them that the chairman and solicitor have returned from America, and giving an account of the proceedings taken in that country during the chairman's sojourn there. Under advice of Messrs. MacFarland and Charles O'Connor, proceedings have been commenced in New York State against Trenor W. Park, Wm. M. Stewart, and General H. Baxter, the vendors, for the whole of the purchase-money paid for the mine, on the ground of fraud. The company are advised that these proceedings will be successful, and are also informed that the defendants are substantial men, and well able to pay if the decision should be against them. A commission will shortly issue from the United States for the examination of witnesses in this country, under which all the original directors and others connected with the formation of the company will be examined on oath, so that all matters relating to the mine will be fully investigated. The directors refrain from giving further particulars, to avoid playing into the hands of those against whom they now or may have to proceed. With reference to the late motion for the production of documents, the directors state that a resolution of the board on the 28th inst. instructed the secretary to give in his cross-examination every information in his power about the company from its formation, but in producing documents he was to be guided by counsel, and acting on this resolution the counsel of the company, upon their own responsibility, took the objection that was afterwards disposed of by the Lords Justices. In conclusion, the directors hope that they will receive the support of the shareholders in the prosecution of such proceedings as may be advised, and also in opposing the application for winding up the company, which if granted will, as they are advised, have the effect of stopping such action, and rendering nugatory all the labour and expense that have already been incurred in America. A letter from the counsel in America, Mr. MacFarland, is attached,

giving it as his very decided opinion that the company will recover a very large verdict in that country, &c.

THE DENBIGHSHIRE CONSOLIDATED MINES.—It must have been most gratifying to the shareholders to have heard the statement made at the meeting reported in another column. This property is situated in one of the most celebrated districts for the production of lead ore, and certainly the best endeavours have been made by the agents to work the mine for a permanency. The increase of capital to 30,000, was most desirable, and when the hands of the directors have been strengthened by the applications for shares which have been suggested, in the course of a short time there can be no doubt that the property will rank with the most successful mines that have ever been opened in this part of Wales.

COCK HILL AND SUNSIDE LEAD MINES (Pateley Bridge, Yorkshire).—These extensive and well-known mines, adjoining those of his Grace the Duke of Devonshire at Grassmoor, have been purchased by our correspondent, Mr. Richard Tredinnick, of Bishopgate-street, who takes possession on March 1 next. Several influential members of the Stock Exchange have joined Mr. Tredinnick, and we trust that this will prove an epoch in Yorkshire mines that will throw open to the public the hitherto exclusiveness of this rich and prosperous metallic district. We refer our readers to the reports and advertisement in this day's Journal.

NORTH POOL.—The meeting is fixed for Wednesday. The directors have determined to push on operations vigorously. The reserve shares, 2500, are being issued to provide the funds.

EXPORTS OF COAL.—By the Monthly Circular of Messrs. Higginson, of Liverpool, we learn that the quantity of coal exported in Dec. was 921,798 tons, against 972,496 tons in the corresponding month of 1873, showing a decrease of 50,698 tons. The particulars are:—From the Northern Ports, 354,009 tons; Yorkshire, 62,101 tons; London, 5274 tons; Liverpool, 60,335 tons; Severn Ports, 327,732 tons; and Scotch Ports, 112,347 tons. The increase was—London, 1735 tons; Liverpool, 12,418 tons; Scotch Ports, 22,741 tons. The decrease—Northern Ports, 63,626 tons; Yorkshire, 9681 tons; Severn Ports, 14,286 tons. Total exports, January to December, inclusive, 12,794,182 tons; ditto, 1873, 11,561,049 tons; increase, 1,233,133 tons.

CHEMICALS, MINERALS, AND METALS.—(Messrs. R. R. Kelly and Co., London, Jan. 29).—Chemicals: Acid, citric, 3s. 8d. to 3s. 9d.; muriatic, 4d. 10s. to 5s.; sulphuric, 3s. 10s. to 4s.; tartaric, 1s. 6½d.; Beaton's alum, best lump, loose and in barrels, 8s. 5s. to 8s. 15s.; ground, 9s. 5s. to 9s. 10s.; cake alum, 6s. 10s.; ammonia, carbonate, 7½d. to 7½d.; muriate, 32s. to 35s.; sulphate, white and grey, from 18s. 10s. to 18s. 15s.; brown, 15s.; sal ammoniac, 44s. to 45s.; arsenic, white powdered, 14s. 10s.; benzole, 30 per cent., 2s. 3d.; 50 per cent., 6s.; bleaching powder, 10s.; copper sulphate, 25s. 15s. to 26s.; green vitriol, 6s.; nitrate, 12s. 9½d. to 12s. 9d.; Sulphate (Glauber salt), 6s. to 6s. 10s.; salt cake, 3s. 5s. to 3s. 10s.; Minerals: Chalk, 2s. 6d. to 2s. 8d.; phosphate of lime, ordinary, 60 per cent., 1s.; 90 per cent., 1s. 4d. to 1s. 5d. per unit; Bolivian, 6s. 15s.; Canadian, 60 per cent., 1s. 4d. per unit; Estremadura, 1s. to 1s. 3d.; Curacao guano, 6s. 2s. 6d. U.K. and 6s. 7s. to 7s.; Continent, 70 per cent.; Chrome ores, 6s. to 8s.; copper ores, 16s. 3d. to 16s. 9d. the unit; iron ores, red hematite, British, 15s. to 23s. at the mines; Spanish colloid nominally at 17s. to 19s. at British ports; clay ironstone, 11s. to 19s.; colloid, 5s. to 11s.; manganese ores, 70 per cent., 110s. to 120s.; pyrites, cupreous, 5½d.; non-cupreous, 9½d. the unit; antimony ore, 12s. 10s. to 13s. 10s.; Metals: Antimony, 52s. to 53s.; copper, tough ingot, 90d. to 92d.; best selected ingot, 92d. to 94d.; Chili bars, cast, 83s. to 83s. 10s.; Chili regulus, 16s. 3d. to 16s. 9d.; Wallaroo, 93s. to 94s.—Pig-Iron: Glasgow warrants, 23s.; Gartsherrie, No. 1, 90s.; Coltness, No. 1, 93s.; Middleborough, No. 3, 59s., nominal.—Lead: English, soft pig, 23s. 5s.; refined red lead, 25s.; quicksilver, 23s., nominal.—Spelter: English, best, 23s. 15s. to 25s.; Silesian, 23s. to 24s.—Tin: English blocks and ingots, 100s. to 102s.; refined, 103s. 10s.; Straits, 91s. 10s. to 93s.; Banca, 100s. to 102s.; Australian, 90s. to 94s.; tin-plates, best charcoal, I.C., 38s., nominal; zinc, sheets, 32s. 10s. to 33s.

LOCAL GOVERNMENT DIRECTORY.

The thirty-fourth annual edition—that for 1875—of the very useful volume bearing this title has just been issued, and will be especially valuable to the readers of the *Mining Journal* for the excellent treatise which it contains on Poor Law Legislation by Mr. W. Cunningham Glen, barrister-at-law, the senior legal assistant to the Local Government Board and principal of the legal department, since it supplies a complete outline of the "Rating Act, 1874," under which metalliferous mines are for the first time systematically rated.

It is explained that—The law with respect to coal mines is not affected by the present measure, and those mines remain rateable upon the same principles as heretofore. With respect to mines other than coal mines, the Courts have held that where the lord's duties are in kind—that is to say, where the lord receives not a money rent, but a fixed proportion of the produce—he (the lord) is rateable in respect of those dues, but that he is not rateable where the reservation is that of a money rent.

The present Act does not apply to mines the dues of which are wholly reserved in kind, and the owner of such mines will remain rateable as heretofore.

In the case of mines the dues of which are reserved in money, or partly in money and partly in kind, the occupier will now be rateable, and the ordinary principles of assessment will apply, except as regards tin, lead, and copper mines. The rules for the assessment of tin, lead, and copper mines, when the dues are not wholly reserved in kind, are comprised in section 7, and are to the effect—That when the mine is occupied under a lease (the term lease including set, licence, or agreement), granted without fine on a reservation wholly or partly of dues or rent, the gross value of the mine is to be taken to be the annual amount of the whole of the dues payable during the year ending Dec. 31 preceding the date at which the valuation list is made, in addition to the annual amount of any fixed rent which may not be satisfied by such dues.

The rateable value of the mines is to be the same as the gross value, except that where the person receiving the dues or rent is liable for repairs, insurance, or other expenses necessary to maintain the mine in a state to command the annual amount of dues or rent, the average annual cost of such repairs, insurance, and other expenses is to be deducted from the gross value for the purpose of calculating the rateable value—1. Where the mine is occupied under a lease granted wholly or partly on a fine—2. Where the mine is worked by the owner—3. In the case of any other such mine to which the foregoing provisions do not apply, the gross and rateable annual value of the mine is to be the annual amount of the dues, or dues and rent, at which the mine might be reasonably expected to let without fine on a lease of the ordinary duration, according to the usage of the country, if the tenant undertook to pay all tenants' rates and taxes and tithe rent-charge, and also the repairs, insurance, and other expenses necessary to maintain the mine in a state to command such annual dues, or dues and rent.

When a tin, copper, or lead mine is rateable under this section, the whole of the machinery, and surface works, and buildings within the boundaries granted by the lease, with the exception of dwelling-houses, will be covered by the assessment estimated upon the dues in the manner already explained.

Any dwelling-houses, however, on the mine, and any machinery or buildings not situate within such boundaries, must be separately valued according to the ordinary principles of assessment.

In the case of tin, copper, and lead mines, the basis of the assessment will be the amount of the dues payable during the year ending on Dec. 31 preceding the date at which the valuation list is made. This date has reference to section 10 of the Metalliferous Mines Regulation Act, 1872, under which the owner or agent of every mine to which that Act applies is required to make a return to the Inspector of the district, on behalf of the Secretary of State, of the quantity of mineral sold or produced from the mine. It was considered convenient that the assessment should be based upon the dues ascertainable at a date at which the accounts were required to be made up for another purpose; and, having regard to this provision, it will probably be found more convenient to defer calling for supplementary valuation lists in those parishes in which mines of the description lastly referred to are situate until after Dec. 31 next.

Again, the occupier of a mine, who is now exempt from being rated, is enabled during an existing lease or agreement to deduct a moiety of any rate imposed upon him in consequence of the Act, unless the terms of the contract are such as to show that at the time of the making of the contract he undertook to bear all future rates which might be imposed in respect of the mine in the event of the abolition of the exemption. The Act also provides that the purser, secretary, or chief managing agent of any tin, lead, or copper mine may, if the overseers think fit, be rated as the owner.

The Directory gives, in addition to the legal matter of interest to those connected with Local Government business, the list of unions formed by the Poor Law Commissioners and Poor Law Board, lunatic asylums, hospitals, reformatory and industrial schools, public analysts, urban sanitary authorities, school boards, &c., the addresses when necessary, as well as the names of the officers, being carefully given. The great utility of the Directory is already well known, and the present edition shows that no efforts have been spared to maintain its well-earned reputation.

DOLCOATH.—Mr. W. H. Rule, mine share dealer of Camborne and Penzance, writes:—This mine is looking well, and adventurers should not be induced to sell at present quotations. Almost constantly some new feature of this vast mine is presenting itself, but one point is, I think, deserving of special mention. The 314 fm. level has been driven east about 60 fms. in a lode worth, on an average, from the shaft, of 1500. per fathom. The shaft has been sunk on this lode about 10 fms., at level, upon equally valuable ground; and, as a winze has been sunk 7 fms. in

the bottom of the 314 east on the north part of the lode only, and has been valued by the agents at 1500. per fathom, it may be fairly surmised that there is tin ground standing at least 50 fms. in length, and 10 fms. in depth, worth 1500. per fathom, which would give reserves untouched to the extent of 75,000. from this point alone, whilst there is every probability of the lode lasting both east and west, for a much longer distance than anticipated. I have heard the reserves in this mine estimated altogether, by good authorities, at half a million of money, but I think the point mentioned by me is of itself sufficient to inspire confidence in doubting shareholders—if there be any.

TIN.—During 1873 tin was produced in Cornwall and Devonshire only; the produce of the mines and streams according to the returns to the Government Inspector, to the Stannary Court, and to the Mining Record Office, being—

District.	No. of Mines	Quantity of black tin.	Value of black tin.	Metal produced.	Value of white tin.
		Tons c. qrs. lbs.	£	Tons.	
CORNWALL:					
Western district.....	25	2,776 11 0 3	158,971		
West Central district.....	89	9,058 14 0 10	678,223		
East Central district.....	25	895 3 2 1	70,039		
Eastern district.....	21	770 15 1 20	58,437		
DEVONSHIRE.....	11	93 8 1 2	7,277		
Tin sold in stone in both counties.....	44	395 10 0 0	31,159	10,000	1,334,300
Tin streams & rivers in both counties.....	—	847 9 0 9	14,390		
Additional, returned by smelters.....	—	47 6 2 3	8,337		
Total.....	215	14,894 17 3 20	1,056,835	10,000	1,334,300

The average price of tin ores (black tin) per ton, deduced from all the sales in each year since 1864 was—1864, 60s. 17s. 6d.; 1865, 55s. 6s.; 1866, 48s. 10s. 9d.; 1867, 50s. 18s.; 1868, 55s. 4s.; 1869, 69s. 16s.; 1870, 75s. 3s.; 1871, 78s. 12s. 6d.; 1872, 87s. 7s.; and 1873, 78s. 1s.

BRYNKINALT COLLIERIES COMPANY.—The general meeting of shareholders was held at the offices of the company, 79, Old Broad street, yesterday (Mr. H. O. Shire in the chair). Mr. Rowntree (the secretary) read the notice convening the meeting, and the minutes of the last were confirmed and adopted. The directors' and manager's reports were received and adopted.

CORNISH MINE SHARE MARKET.—There has not been much business during the past week in the Share Market. The following are the closing prices:—Botallacks, 47½ to 52½; there seems rather a better enquiry for these shares. Carn Breas are weaker, and close 57 to 58. A large business has been done in Cook's Kitchens, which close firm at 9½ to 9¾. Dolcoaths have been moderately dealt in at 60 to 61. Providence better, 7 to 8. South Conduwars about 5; a good business has been done in these shares, which kept very firm at about 5. South Croftys have not been much dealt in, and close lower, at 12 to 13. South Carn Breas are quiet at 1½ to 1½. Rosewall Hills, ½ to ¾. Trumpet Consols nominally ¾ to 1½. Tinrofts declined to 28½, but close firmer at 28½ to 29. West Bassets quiet, 7½ to 8. West Seton—the water is still rising here; they are about to put in another lift down to the 100, which they expect their engine to work, in addition to the other two to which it is connected. West Frances, 9½ to 10. West Tolgus dull, 65 to 67. Killy (St. Agnes), 5½ to 6. Wheel June, 5 to 5½. Wheel Peevors, 5 to 5½. Wheel Unys have declined to 3½, 3¾.

Cook's Kitchens in demand at 9 to 9½; they expect shortly to hole Dunkin's shaft, when it is supposed they will lay open 40,000, or 50,000, worth of good tin ground, which will, we trust, enable them to re-enter the Dividend List. The agents have been labouring most energetically to bring about profitable results, and we believe great confidence is felt in the management. Farbola, 1 to 1½; this mine is looking promising, and but for the heavy rains, owing to the reason, we are about to put in another lift down to the 100, which they expect their engine to work, in addition to the other two to which it is connected. West Frances, 9½ to 10. West Tolgus dull, 65 to 67. Killy (St. Agnes), 5½ to 6. Wheel June, 5 to 5½. Wheel Peevors, 5 to 5½. Wheel Unys have declined to 3½, 3¾. Cook's Kitchens in demand at 9 to 9½; they expect shortly to hole Dunkin's shaft, when it is supposed they will lay open 40,000, or 50,000, worth of good tin ground, which will, we trust, enable them to re-enter the Dividend List. The agents have been labouring most energetically to bring about profitable results, and we believe great confidence is felt in the management. Farbola, 1 to 1½; this mine is looking promising, and but for the heavy rains, owing to the reason, we are about to put in another lift down to the 100, which they expect their engine to work, in addition to the other two to which it is connected. West Frances, 9½ to 10. West Tolgus dull, 65 to 67. Killy (St. Agnes), 5½ to 6. Wheel June, 5 to 5½. Wheel Peevors, 5 to 5½. Wheel Unys have declined to 3½, 3¾.

MR. ISHAM BAGGS.—A large number of the readers of the *Mining Journal* will learn with deep regret of the death of Mr. ISHAM BAGGS, which occurred on Tuesday last. His numerous communications, especially in former years, were of an instructive and interesting nature, and no doubt did much to assist the making of scientific knowledge popular. His lectures on science delivered at the Royal Polytechnic Institution, when Dr. Ryan was the leading spirit of the place, some 30 years ago, always secured an attentive and appreciative audience; and at the Royal Panopticon he was not less favourably known as a lecturer. Amongst inventors Mr. Baggs always took a prominent part, his inventions embracing a very large field of ingenuity—steam-hammers, relays for telegraphic purposes, ice safes, and various other matters of general utility having received his attention, whilst more recently he had been very energetically engaged upon improvements in illumination by means of combining carbonic oxide gas, the vapours of hydrocarbons, and steam, by which he anticipated supplying the public with illuminating gas, equal to that now used, at 6d. per 1000 cubic feet. Many of his inventions were highly appreciated, and sold for large amounts; but he never understood the value of money whilst he was in possession of it, and he has died at the age of 62 years, leaving a widow and two children, totally unprovided for, to deplore their loss.

INVENTORS' ALMANAC.—The seventeenth annual edition of this handsome little sheet almanac has been issued by Mr. Michael Henry, patent agent, of Fleet-street, and will, as usual, be found useful for reference by those interested in industry and inventions, also, in addition to the usual calendar matter, it contains lists of the principal officers connected with the granting of patents and registration of designs, analyses of patent applications, &c., record of the progress of inventions, and much other valuable information.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 20—New Llangynog.....	25	£15 0 0		Panther Lead Co.
23—Willoughby.....	12	15 1 6		Runcom Co.
26—North Laxey.....	60	16 7 6		Walker, Parker, and Co.
—Islay.....	10	16 0 0		ditto
26—Foxdale.....	100	24 1 6		Trefry's Trustees.
—Asheton.....	60	14 16 6		Adam Bytton.

Date.	Mines.	Tons.	Price per ton.	Purchasers.
Jan. 21—Laxey.....	200	£3 5 0		Kenrick and Son.

BLACK TIN.

Date.	Mines.	Tons c. q. lb.	Price per ton.	Amount.	Purchasers.
Jan. 26—So. Conduwars.....	12 19 2 34	£28 0 0		£ 752 3	5—Tamar Co.

COPPER ORES.

Date.	Mine.	Tons	Price p. ton.	Purchaser.
Dec. 17—Coldbeck Fells.....	20	£21 11 6		J. Bibby, Sons, and Co.
— ditto.....	20	6 13 6		ditto

COPPER ORES.

Sampled January 6, and sold at Swansea, January 26.

Mines.	Tons.	Produce.	Price.	Mines.	Tons.	Produce.	Price.
Cape Ore.....	73	32½	£26 15 6	Altun Ore ..	97	5½	£3 15 0
ditto.....	73	32½	26 9	ditto.....	96	5½	3 17 6
ditto.....	35	34½	29 3	ditto.....	96	5½	3 15 0
ditto.....	65	23½	19 0	Knockmahon 142	9	9	7 3 6
ditto.....	65	23½	19 2 6	ditto.....	134	9	6 17 0
ditto.....	65	23½	19 2 6	Union.....	101	9½	7 0 6
ditto.....	65	25	20 7 0	West Canada 60	13½	5	5 5 0
ditto.....	65	25	20 6 0	Copper Ore ..	7	12½	9 10 6
ditto.....	64	24½	20 6 6	ditto.....	6	23½	17 3 6
Ref.....	6	45½	37 3 0				

Registration of New Companies.

Several joint-stock companies have been duly registered:—
SPON LANE COLLIERY COMPANY (Limited).—Capital 100,000*l.*, in 10*l.* shares. To carry out an agreement made between A. L. Silvester and J. B. Silvester, trustees of the will of M. E. Silvester, and George Twigg, for the lease of seams of coal under land at West Bromwich, County of Stafford. The subscribers are—H. Williams, Rockingham Hall, Worcester, ironmaster, 50; J. B. Stone, Lothersdale, Aston Village, near Birmingham, glass manufacturer, 50; J. H. Pearson, Handsworth, ironmaster, 50; T. Underhill, West Bromwich, doctor of medicine, 50; S. Roberts, West Bromwich, ironmaster, 50; A. L. Silvester, Birmingham, wholesale jeweller, 50; and J. B. Silvester, West Bromwich, silversmith, 50. Nearly all the subscribers will be directors with a qualification of 50 shares. The offices of the company will be at 8, New Hall-street, Birmingham, the secretary being Mr. Robert Mayo.

THRAPSTONE IRON ORE COMPANY (Limited).—Capital 15,000*l.*, in 10*l.* shares. To carry out an agreement made between T. Whitehouse, of Northampton, coal merchant, and J. Bedford, of Change-alley, Sheffield, for the purchase of property near Thrapstone, Northamptonshire. The price to be paid to the vendor is 8000*l.* The subscribers are—Richard Turner, Campbell-square, Northampton, shoe manufacturer, 175; George Turner, Campbell-square, Northampton, shoe manufacturer; John Turner, 11, St. Giles-street, Northampton, physician, 19; A. Griffiths, Sheffield, manager of iron-works, 5; J. Bedford, Change-alley, Sheffield, 50, broker and metal merchant; T. Whitehouse, Northampton, merchant, 200; and B. J. Esam, Sheffield, cashier, 5. Messrs. R. Turner, G. Turner, T. Whitehouse, J. Bedford, and W. Trickett will be the first directors of the company, their qualification being 40 shares.

ANGLO-DANUBIAN BANK (Limited).—Capital 800,000*l.*, in 20*l.* shares. To transact business as bankers and agents with the Danubian countries. The subscribers are—P. E. Poujady, late diplomatic agent in Roumania and Egypt, Paris, 100; L. W. Broadwell, Vienna, 100; P. S. Post, Consul-General of the United States at Vienna, 100; D. A. Stouglard, Bucharest, 100; Son Gluca, Bucharest, late Minister, 100; H. Chatteris, 1, Gresham Buildings, 1; and C. Griffiths, 30, St. James-street, W., 1.

NATIONAL PENNY BANK (Limited).—Capital 15,000*l.*, in 10*l.* shares. To receive money on deposits, &c. The subscribers (who take one share each) are—E. Stanhope, M.P., 3, West Eaton-place; H. Cole, C.B., Thurlow-square; T. M. Eardley Wilmot, Clapham; W. M. Wilkinson, Lincoln's Inn-fields; Lieut.-General Cavanagh; G. C. T. Bartley, Ealing; and H. Y. D. Scott, Ealing.

WIGAN ROLLING MILLS COMPANY (Limited).—Capital 50,000*l.*, in 100*l.* shares. To establish rolling mills, forges, &c., at Wigan. The subscribers are—W. J. Lamb, Thornhill, Lancashire, 50; H. Mayhew, Hindley House, near Wigan, 20; J. Smethurst, Ince, near Wigan, 10; J. S. Walker, Southport, 10; B. Fisher, Standish, 10; and W. A. Walker, Wigan, 10.

J. M. JOHNSON AND SONS (Limited).—Capital 50,000*l.*, in 5*l.* shares. To take over the business of Messrs. Johnson and Sons, printers, &c., Hatton Garden. The subscribers are—M. B. Sampson, 4, Westminster Chambers, 2; H. W. Savage, 24, Kennington Park-road, 2; W. M. Leslie, 1, Belsize-square, 2; J. M. Johnson, Maida Hill, 2; E. Johnson, Castle-street, Holborn, 2; C. Johnson, Castle-street, 2; and W. P. Dilworth, Barnsbury, 2.

HUDDESFIELD INCORPORATED CHAMBER OF COMMERCE, AND NEWCASTLE AND GATESHEAD CHAMBER OF COMMERCE.—These two companies are registered with limited liability, but are allowed to dispense with the word limited after their name, as they are not formed for purposes of gain.

PRESTON COTTON SPINNING AND MANUFACTURING COMPANY (Limited).—Capital 50,000*l.*, in 5*l.* shares. To acquire a cotton mill at Preston. The first seven subscribers are—Robert Grime, Preston, 50; R. Needham, Southport, 50; J. S. Anderson, Preston, 50; G. Toulmin, Preston, 50; J. Beck, Ashton, 50; T. Balshaw, Preston, 50; and J. Boulting, Preston, 50.

THE GABRIEL VALLEY COLLIERIES COMPANY (Limited).—Capital 100,000*l.*, in 10*l.* shares. To acquire collieries near Bridgend, Glamorganshire, in accordance with the provisions of an agreement made between Uriah Miller, G. H. Miller, and A. G. Miller on the one part, and V. A. Applin, on behalf of the company, on the other part. The subscribers are—F. Barlow, 19, Parliament-street, solicitor, 100; Uriah Miller, Bridgend, colliery proprietor, 100; G. H. Miller, 5, Great Winchester-street Buildings, colliery proprietor, 100; A. G. Miller, 5, Great Winchester-street Buildings, 50; H. T. Edwards, 1, Tokenhouse-yard, public accountant, 10; A. A. James, Tokenhouse-yard, public accountant; and R. H. Boate, St. Michael's-alley, Cornhill, auctioneer, 1. Mr. Uriah Miller will be the managing director. The qualification for director is 100 shares, and the remuneration will be 500*l.* yearly, except when the net profit shall have exceeded 5000*l.* in any one year, it will then be 10 per cent. upon such net profit.

UNITED KINGDOM AQUARIUM COMPANY (Limited).—Capital 200,000*l.*, in 10*l.* shares. To establish and erect aquariums in various parts of the kingdom. The subscribers are—W. C. Wingfield, Army and Navy Club, 10; R. G. Elwes, 7, Westminster Chambers, 10; T. R. Gardner, 21, Gloucester-street, S.W., 10; G. J. Bruce, Winchester, 1; G. F. Denny, 29, Great St. Helens, 1; W. C. Jackson, Bucklersbury, 1; C. M. Owen, 41, Gloucester Gardens, 1.

BOUNDARY SPINNING COMPANY (Limited).—Capital 50,000*l.*, in 5*l.* shares. To carry on business as cotton spinners, &c., at Oldham. The subscribers (all of Oldham, who take one share each) are—D. Marsland, J. Davidson, E. J. Brierley, T. Wild, L. Lambert, J. Wilson, and J. Hargreaves.

LADY HOUSE COTTON SPINNING COMPANY (Limited).—Capital 15,000*l.*, in 5*l.* shares. To acquire a cotton mill at Milnrow, Lancashire.

JOHN PERRIN AND COMPANY (Limited).—Capital 10,000*l.*, in 10*l.* shares. To purchase a business at Hyde, Cheshire.

HARLAND'S PATENT LOCK, NUT, KNOB, AND HANDLE COMPANY (Limited).—Capital 10,000*l.*, in 5*l.* shares. To acquire an invention for improvements in handles for locks.

PORTABLE PRINTING ROLLER COMPANY (Limited).—Capital 10,000*l.*, in 1*l.* shares. To acquire and work a patent for roller machines.

ROYAL PARK AND BELLE VUE GARDENS COMPANY (Limited).—Capital 15,000*l.*, in 5*l.* shares. This is a Blackpool company.

ROCHDALE AND ROSSENDALE BREWERY COMPANY (Limited).—Capital 10,000*l.*, in 5*l.* shares. To acquire a brewery at Bacup.

LYTTEL'S IRON AGENCY (Limited).—Capital 7000*l.*, in 5*l.* shares. To act as agents to Mr. W. A. Lyttel, and to promote the introduction of inventions relating to pig-iron, &c.

BLACKBURN DISCOUNT INVESTMENT, AND LOAN COMPANY (Limited).—Capital 50,000*l.*, in 10*l.* shares.

MINE CAGES.—Mr. E. T. HUGHES (for Mr. N. Libotte, of Gilley) has patented an improved safety apparatus applicable to cages used in the shafts of mines and hoists. This improved safety apparatus is distinguished from all others by its simplicity and facility of construction, for it is not operated as hitherto by springs, which are susceptible of being relaxed or not acting, but by the motion and weight of the cage—that is, by all its acting force.

ALUM.—Mr. W. BEATSON, of the Chemical Works, Rotherham, has patented some improvements in the manufacture of alum and products resulting therefrom. This consists—1. In employing an excess of sulphuric acid, so as to convert muriates (or chlorides) of soda or potash into bisulphate of soda or potash, whereby the muriates are entirely decomposed. The resulting compound is boiled with clay or shale until a neutral solution of alum is obtained, which is crystallised in the usual manner.—2. In burning the clay or shale, in conjunction with small coal or fuel, in a tall, upright kiln; and—3. In utilising the residue of the clay or shale for making soluble silicates, hydraulic or other similar cement, or bricks or artificial stone.

IMPROVED ORE SEPARATOR.—Messrs. C. H. CAMPFIELD, and J. M. HORNBECK, of Ellensburg, Oregon, have patented an invention which relates to a method of attaching a covering of villous or fibrous fabric of hair to the bottom of an inclined frame. When the machine is adjusted to the proper angle the friction produced by the bristling surface of the lining is so great that it gives the water and sand a rolling motion, which carries the light, flaky, and floating particles against and gradually into the fibrous covering of the lining. The weight of the water and the gravity of the gold tend to carry the particles down to the base of the bristles, which form so many little pockets for collecting and retaining the gold until removed by the miner.

Mining Correspondence.

BRITISH MINES.

ABERDAUNANT.—S. Toy, Jan. 27: Setting Report: No. 2 adit, to drive east, by four men, at 7*l.* per fathom; the lode in this end is producing a little lead. No. 4 stope above this level, by five men, at 5*l.* 10*s.* per cubic fathom, for the month; the lode in this stope is not quite so good; now worth 13*l.* per cubic fathom for lead. No. 1 adit, to drive east, by two men, at 4*l.* 15*s.* per fathom, for the month; there is no lead to be seen in the lode at present, but it is of a kindly appearance, and I expect a change for the better soon. We have commenced the dressing of lead ores for another sampling of lead.

ASSHETON.—John Craze, Jan. 25: The lode in the 50 east, as far as seen, is worth 20*l.* per fathom; no lode has been taken down for the last 8*l.* driving, but shall do so in the course of a few days. No material change has taken place in the character of the lode at the 50 west during the last few days; the lode is now from 3 to 4*l.* wide, composed of sugar spar, clay slate, lead, and blende ores, worth for lead over 20*l.* per fathom; is of a softer nature than ever seen in the adit, and if a good course of ore will not be met with here in 6*l.* more driving, I shall be greatly disappointed. The lode in the 40 west of Browne's is 4*l.* wide, composed of sugar spar, schist, lead, blende, and copper ores, and carries a beautiful flookan on both sides, worth over 20*l.* per fathom. I daily expect an improvement here. The highest offer for the parcel of lead to hand is 14*l.* 6*s.* 6*d.* per ton; we expect more biddings to-morrow.

BAMFELDE.—James Juleff, H. P. Haley, Jan. 23: Setting Report: Stope in back of the 112, west of No. 4, with four men, at 4*l.* per fathom, and worth 1½ ton of copper ore per fathom. No. 1 stope, in back of the 102, west of No. 4, with six men, at 3*l.* 10*s.* per fathom, worth 15 cwt. of copper ore per fathom. No. 2 stope, in back of the 102, with four men, at 3*l.* 15*s.* per fathom, and worth 1 ton of copper ore per fathom. No. 3 stope, in back of the 102, west of No. 4, with six men, at 3*l.* per fathom, and worth 1 ton of copper ore per fathom. No. 4 stope, in back of the 102, with four men, at 3*l.* per fathom, and worth 1 ton of copper ore per fathom. No. 5 stope, in back of the 102, with six men, at 3*l.* per fathom, and worth 1 ton of copper ore per fathom. Stope in back of the 90, west of No. 4 shaft, with four men, at 3*l.* 5*s.* per fathom, worth 1 ton of copper ore per fathom. The 112, to drive west of No. 4 shaft, with six men, at 9*l.* per fathom, lode worth 10*l.* per fathom. The 102, to drive west of No. 4 shaft, with six men, at 6*l.* 15*s.* per fathom; the lode is improving, and produces good stones of copper ore. The 90, to drive west of No. 4 shaft, with six men, at 7*l.* per fathom; this end is opening out in a lode that will pay for stoping. The 70, to drive east of No. 4 shaft, with two men, at 10*l.* per fathom; the lode in this end is looking very promising. You will see no lead above report that the ends are improving, and the stopes looking very well.—Iron Mines: The adit cross-cut to drive north, at Stowford, with four men, at 5*l.* per fathom.

BLUE HILLS.—S. Bennetts, A. Gripe, Jan. 23: The 40 west, on the south part of the Pink lode, looks promising, and worth 6*l.* to 7*l.* per fathom. The 50 west has lately been resumed on the same part of the lode, which at this point is worth 5*l.* per fathom. The Wheel Betsy lode in the winze below the 13, east of Wheel Joy shaft, is worth 10*l.* per fathom, the lode being 2½ to 3*l.* wide. The water in the mine is still very abundant, and consequently the continuance of the lode is not in doubt. The 100 west, to drive north, at Stowford, with four men, at 5*l.* per fathom. The same level to drive west on the main lode, at 7*l.* per fathom; the lode is worth 10*l.* per fathom for lead ore and blende. This level to drive east, on the south lode, at 5*l.* 10*s.* per fathom; the lode is worth 15*l.* per fathom. These drivings are opening up very good ground for stoping on.—Tribute Pitches: The 163 to drive west on main lode, at 3*l.* per fathom; the lode is worth 10*l.* per fathom for lead and blende. The level to drive west on Whitelake lode, at 12*l.* per fathom, start 1 fathom; the lode in this end is still in a twich, but prospects are more favourable, and it will not be a great while before a change takes place. The 100 to drive east, on south lode, at 3*l.* 10*s.* per fathom; the lode is 3*l.* wide, producing some good stones of lead and blende, and very promising for an improvement.—Tribute Setting: We have 18 pitches at work, varying from 3*l.* per ton for lead and 25*s.* per ton for blende to 8*l.* for lead and 40*s.* for blende, the highest price being given for the upper levels.

COCKHILL AND SUNSIDE.—Chas. Williams, Jan. 22: I have been over the Cockhill and Sunside all day yesterday, and as I anticipated, have met you that all points of operations are looking exceedingly well, and the men are breaking large quantities of rich lead ore, and forwarding to surface ready for smelting. The ore is so pure that it requires little or no dressing. I do not at present see any difficulty whatever to return 50 tons of metallic lead per month, at a profit of 500*l.*, and upon an outlay of 1000*l.*, the quantity can be doubled to 100 tons per month, at the same rate of profit.

COURT GRANGE.—E. Dunkin, Jan. 28: We have now driven about six fathoms east of New Broganian shaft, in the 12, and as I anticipated, have met you that all points of operations are looking exceedingly well, and the men are breaking large quantities of rich lead ore, and forwarding to surface ready for smelting. The ore is so pure that it requires little or no dressing. I do not at present see any difficulty whatever to return 50 tons of metallic lead per month, at a profit of 500*l.*, and upon an outlay of 1000*l.*, the quantity can be doubled to 100 tons per month, at the same rate of profit.

CHRENYER AND WHEEL ABRAHAM UNITED.—William Thomas, Samuel Arthur, Jan. 27: We are glad to inform you that during the last two days a great number of our men have resumed work. The water at Sturt's engine-shaft is drained to the 215, and we hope to drain it to the bottom by Friday.—Pelly's Engine shaft: The water here is drained 8 fms. below the 210. We think by Saturday that nearly all our bargains will be worked. Saturday is our setting-day, and we can easily be seen by the wind.

DE BROKE.—T. Hodge and Sons, Jan. 25: The water in Wilson's shaft has increased, which renders it necessary to have a lift; this will be got ready as soon as possible. The said shaft is now down into sound and settled mineralised rock, the fissures in which are well filled with lime and lead ore, in fact, judging from the strength and matrix of the vein in the 25, we feel persuaded that the next level will open out large quantities of ore. The other bargains have undergone no change since our last. We shall sample to-morrow 15 tons of lead ore, for sale on the first working.

DYLLIFE.—Edward Evans, Edward Rogers, Jan. 27: Dyllife Lode: We have cross-cut fully through the lode at the 120, and find it is about 4*l.* wide; the east side of the level is producing rich stones of lead ore, worth 15*l.* per fathom. We expect a very great improvement in its size and value as we drive in this direction, as the cross-cut came into the west of the bunch of ore at the 105 above. At the 40, driving east of boundary shaft, the lode is a little improved. In the back of the 15 the value of the lode is falling off as we go up, but there is every reason to believe that the lode will be found a rich one. There is no alteration in any other part of the mine. A full report shall be sent you next week.

EAST CHIVERTON.—R. Southey, Jan. 26: Since the last general meeting I have put a staff of men to drive the 64, east of the shaft, on the course of the lode, which is large and kindly, and producing occasional stones of lead; this has exceeded my expectations, as the lode in the 52, over this point, was small and unproductive. I am pushing forward the points named in my previous report with all possible dispatch, and am much pleased to say that as the ends are extended, especially in the eastern ground, the lode is still improving. The water here during the past month has greatly increased; our machinery is, however, of ample power to keep the mine clear, and is in perfect order, and there is, therefore, no fear of anything likely to occur to prevent our operations. We are preparing a parcel of lead for the market.

EAST VAN.—W. Williams, Jan. 27: We have no change to report here. The present end of the 25 is 133 fms. west of shaft, and we have again started to cross-cut north to prove the lode. Set to six men, at 140*s.* per fathom.

EAST WHEEL BASSET.—Richard Pryor and Son, Edward Adams, Jan. 26: The ground in the 110 is more favourable for driving, and the tribute pitches throughout the mine are looking better than for some time past.

EAST WHEEL GREVILLE.—E. Hosking, Wm. Bennetts, Jan. 23: We are steadily forking the water, which is now down 5½ fathoms below the 110. The bargains above the 110 are looking much the same as when we last wrote.

EAST WHEEL LOVELL.—R. Quentrell, Jan. 27: At Fatwork we expect the water will be in for by the early part of next week.—Tregoner's: The water was in for, and the men commenced to work on Monday week last, since which we have commenced the water to the 34, and have commenced stoping in a lode worth from 15*l.* to 20*l.* per fathom. The lode in the 34 east is just the same as last reported, worth 20*l.* per fathom or upwards.

FRON VELLAN.—Capt. Harper, Jan. 27: In No. 1 stope in roof of level, west of deep adit, the lode is from 2 to 3*l.* wide, of a most promising character, composed of carbonate of lime, spar, blende, and a little lead ore; at present the lode has fallen off a little in its value, but this we consider only temporary, as its appearance is very encouraging. In No. 2 stope in the north part of the lode, west of deep adit, the lode is 3½*l.* wide, worth for lead ore much the same as for some time past; branches of lead ore, and also the main part of the lode at this point goes north, therefore I should recommend the driving of the cross-cut north to intersect the north lode, to intersect which we shall only have a very few fathoms further to drive. We are going on with the dressing as fast as possible.

GAWTON COPPER.—G. Rowe, G. Rowe, jun., Jan. 23: The lode in the 117, east of King's engine-shaft, is improving in character, and yielding muddle and ore to the amount of 1 ton per fathom. The crey part of the lode discovered in the 95 cross-cut, the lode in this end is still in a twich, but prospects are more favourable, and it will not be a great while before a change takes place. The 100 to drive east, on south lode, at 3*l.* 10*s.* per fathom; the lode is 3*l.* wide, producing some good stones of lead and blende, and very promising for an improvement.—Tribute Setting: We have 18 pitches at work, varying from 3*l.* per ton for lead and 25*s.* per ton for blende to 8*l.* for lead and 40*s.* for blende, the highest price being given for the upper levels.

GOGINAN AND LEVEL NEWYDD.—Jan. 25: During the past month, or since report for general meeting, the water has been drawn out of Bryn Pica shaft; the same deepened 9 fms., and fair progress now being made. The water has also been forked out of the 100 with much trouble, there being such a great quantity of surface water coming down after the late snow and heavy rain, but little has been done in this level lately towards cutting in under Bryn Pica shaft, the place being full of stuff and water in, &c.; it is, however, now nearly clear, and we shall be able to commence rising very shortly. The western shaft below the 80 has been deepened and secured 2 fms. 2*l.*; this point has also been retarded through the same cause, and not being able to draw the stuff, but is now being pushed on with full force, and will soon be completed to the 110, when it will be continued below that level to open out the ore ground. The tribute pitches are looking much as usual, producing from 12 to 15 cwt. of ore per fathom. The dressing and all surface operations are being vigorously carried on, and, weather permitting, we shall sample 20 tons of silver-lead ore on Tuesday, Feb. 2.

GORSEED AND MERLLEY CONSOLS.—W. Edwards, Jan. 28: We are getting on well with the opening of the Merlley pit, and do not expect it will take us long before we reach the desired object.—Dressing Floor: We are getting on with the preparation of another parcel of ore for the next sale, but cannot say at present what quantity we shall have.

GREAT LAXEY.—John Cornish, Jan. 26: Deep Mine: The lode in the 235 south has been cut through, and we are now driving south on its course, but its not yet very productive. In the same level north we are driving by the side of the lode in more favourable ground. I do not see the slightest change in the character of the lode or ground in Welsh shaft, which is now down from 7 to 8 fathoms below the 220. The 220, driving north from this shaft, is not so productive as last reported, but the same level driving south from No. 1 winze against has improved, now being worth from 50*l.* to 60*l.* per fathom, and improving; this we consider a most important and favourable feature, both for the ground above and below. The lode in the 210 north is not looking quite so well, and we have not the slightest perceptible change yet in the 200 north end. In the 190 north we are putting out a cross cut east, but we have not yet intersected any more lode; from indications, however, I think we have still a part before us. In the 145 north the part of the lode being carried is worth 35*l.* per fathom, with still a portion standing on either side. Looking at our stopes in this section of the mine they are a little better than for some time past. Dumbell's section of the mine continues to open out pretty well, but I see nothing new to which I need call special attention, everything being without much change. At Glen Roy and the Glen level a similar remark will apply. All the machinery throughout these mines is working well, and I expect further improvement now cutting a large portion of timber with the circular saw, which is at present driven by steam. The dressing department is progressing satisfactorily, and we hope to sample again on Tuesday next if possible—every effort shall be made.

GREAT RETALLACK.—J. Harris, Jan. 23: In our driving the 40 this week we have met with a hard patch of lode come in from the south, which has very much squeezed the leader we are driving on, now about 2*l.* wide, containing patches of blende, but not enough to value. We met with a similar thing just before we met with the last run of blende ground we have passed through, and I am hoping we shall meet with similar results as we advance.

GREAT WEST VAN.—T. Hodge, Jan. 23: Setting Report: The 34 fm. level cross-cut to drive north of Eliza's shaft, by six men, at 8*l.* per fathom. It is extended 11*l.* north of the new lode, the rock in which is all that can be desired for the growth of ore in large quantities. The cross cut is also letting out more water, which is favourable. From the present indications we have good ground for hope that something valuable will be met with in this direction. The 46 west end, to four men, at 7*l.* per fathom. The lode here is looking more promising, and a change for the better may take place at any time. To stop the back of said level, east of Jenkin's winze, by four men, at 75*s.* per fathom, the lode in which is worth 20*l.* per fathom. A trial level to drive west of Jenkin's winze, by two men, at 7*l.* per fathom, the value of which we will report in our next. The 46 east, to four men, at 8*l.* per fathom, the lode in which is 4*l.* wide, yielding good ribs of blende and lead ore, a promising lode. The winze below the 34 west, to four men, at 7*l.* 10*s.* per fathom. The lode here is standing in the south, but we think another 6*l.* sinking will bring it into the winze. To stop the back of the 34 fm. level west, by two men, at 75*s.* per fathom. The lode is worth 14*l.* per fathom. To drive a trial level west of the old stuff, in the back of the 34, west level, by two men, at 7*l.* per fathom, the lode in which is worth 5*l.* per fathom. To stop the back of the 34, west level, by two men, at 45*s.* per fathom, worth 6*l.* per fathom. To stop the back of the 34, east of new winze, by two men, at 60*s.* per fathom, worth 4*l.* per fathom. To stop the back of the 34, west of new winze, by two men, at 40*s.* per fathom, worth 6*l.* 10*s.* per fathom. The 34 west end is suspended. The lode here is large, composed principally of carbonate of lime, with spots of blende, and worth 7*l.* per fathom. The lode is not too low, and we can go below the 20 we shall have to case and divide the shaft from the surface to the adit level, and bring down the kibble to draw away the stuff. I purpose clearing both the 10 and 20 fm. levels as soon as this is done. From what I have already seen of the 10 fm. level I think that there is a great deal of tin ground standing about this level that will pay for taking away, and will let on tribute as soon as fairly laid open. We have been sending water to the dressing floors for the last three weeks, which we have been engaged in dressing the leavings on a small scale; but we are now engaged in dressing the whole of the tin ore, in order to work with our limited supply of water, not having to waste the engine more than three strokes per minute. Everything here is progressing satisfactorily, the engine and flat rods working well.

GREAT WHEEL LOVELL.—Capt. J. Prisk, Jan. 28: The lode in the 44, east of Hitchen's shaft, has a much better appearance, and is producing some good work for tin; the ground is also improved, and is much more congenial for the production of mineral, making this part of the mine decidedly better. In the 44, west of sump winze (driving towards the last named end), we have an improvement—lode 1*l.* wide; it will about pay for driving and will open up stoping ground; good progress has been made here this month. In the 34, east of sump winze, we have driven through some good tin ground, but the lode in the present end is rather disordered; I expect to have a few fathoms of poor ground here, as the main shoot of tin in the stopes and level above is dipping east pretty fast. In the 34 cross-cut north we have intersected a large and masterly lode, containing good work for tin; but, the end being so wet, I have directed the men to drive on eastward by the side of it for a few feet, which will enable us to open out on it with greater dispatch. The lode in the 34 end (on south lode) has fallen off, but I think will shortly improve, as the stopes below, which is still a little ahead, is looking well, and worth 7*l.* per fathom. No. 1 stope is not too low, and we can go below the 20 we shall have to case and divide the shaft from the surface to the adit level, and bring down the kibble to draw away the stuff. I purpose clearing both the 10 and 20 fm. levels as soon as this is done. From what I have already seen of the 10 fm. level I think that there is a great deal of tin ground standing about this level that will pay for taking away, and will let on tribute as soon as fairly laid open. We have been sending water to the dressing floors for the last three weeks, which we have been engaged in dressing the leavings on a small scale; but we are now engaged in dressing the whole of the tin ore, in order to work with our limited supply of water, not having to waste the engine more than three strokes per minute. Everything here is progressing satisfactorily, the engine and flat rods working well.

GREAT WHEEL VOR UNITED.—S. Harris, Jan. 27: During the past four weeks we have cut down West Metal engine-shaft from the adit level to the 10, and are now dropping the lift from the 10 to the 20 fm. level, and in the course of a few days I expect to have the 20 in for. We do not anticipate having much ground to cut in the shaft below the 10, and therefore calculate on making much greater progress in forking the water to the 20, and we can go below the 20 we shall have to case and divide the shaft from the surface to the adit level, and bring down the kibble to draw away the stuff. I purpose clearing both the 10 and 20 fm. levels as soon as this is done. From what I have already seen of the 10 fm. level I think that there is a great deal of tin ground standing about this level that will pay for taking away, and will let on tribute as soon as fairly laid open. We have been sending water to the dressing floors for the last three weeks, which we have been engaged in dressing the leavings on a small scale; but we are now engaged in dressing the whole of the tin ore, in order to work with our limited supply of water, not having to waste the engine more than three strokes per minute. Everything here is progressing satisfactorily, the engine and flat rods working well.

GREEN HURTH.—W. Vipond, Jan. 23: The end south from incline, on No. 1 cross vein, is still poor, but I think slightly improved since last week. The stopes and slates above and behind this continue with no change worthy of notice. The stopes above adit is full as good as last reported. The pillar is still yielding strongly brangled work, but we are not getting the great part of the tin taken out. There is no change in the old vein east from incline, or in cross cut from rise in low level.—Kutter's Level: There are more rocks and clayey points in this at present, which makes it easier for driving.

HINSDON DOWN.—James Richards, Jan. 28: Bailey's Shaft: In the 150 fm. level west the lode is fully 4*l.* wide, consisting of capel, quartz, muddle, peach, and a little copper and tin ores. In the 150 west, east of Hocking's winze, the lode is of the same size—5*l.* wide, and is now worth 25*l.* per fathom. In the 140 fm. west, on the south part of the lode, the lode is 4*l.* wide, and is now worth 15*l.* per fathom. In the 140 west, on the north part of the lode, the lode is 2*l.* wide, and is now worth 10*l.* per fathom. In the 120 west, east and west of Wadge's winze, the lode is worth 12*l.* per fathom. The lode in the stopes in bottom of the 120 west, and west of Wadge's winze, on the north part of the lode, is worth 15*l.* per fathom. In the 110 west the lode does not at present contain much tin, but the lode is, however, very kindly, being composed of capel, quartz, peach, and gossan of a very rich appearance, and ore worth 3*l.* per fathom. In Brewer's winze, sinking below the 110 west, the lode is worth 4*l.* per fathom.

ILLOGAN.—R. Pryor and Son, Jan. 27: We are still cutting branches of spar in the deep adit cross-cut south, which contain muddle and copper ore. No other change to notice during the past week.

KINGSTON VALLEY.—G. E. Richards, Jan. 28: The winze in the bottom of the adit level, and the rise in the 18 west are now holed. The lode in both places has continued up to the point of communication to produce a good quantity of blende and lead ores. In the 18 west good progress has been made. The part of the lode being carried is about 4*l.* wide, composed of capel, quartz, sulphur, muddle, a proportionate of carbonate of lead, and good saving work for silver-lead ore. From certain indications it is probable that another portion of the lode is standing to the south of this level, in which direction it is considered that it will be expedient shortly to cross-cut, to ascertain if anything of importance is standing in that direction. As this level now approaches the valley to the west it is becoming much shallower.

NEW CONSOLS.—R. Pryor, T. Jenkin, H. Vial, Jan. 25: The water is all in for to the bottom of the mine (96 fm. level), and the men are engaged in driving north and south of Phillips's engine-shaft to cut through the whole of the lode in order to ascertain its size and value. We have communicated the rise in back of the 56 with the winze sunk below the 74 on the south part of the lode, which has given good ventilation, and laid open a valuable piece of ground. There is no other change worthy of notice in our underground department since last week's report. All our surface work is being proceeded with as fast as the weather will permit, and the carpenters are busily engaged in laying down tram-roads, &c.

NEW HENDRA.—R. King, Jan. 28: The men are making good progress in the deep adit driving on a branch, which produces a little copper, and in a beautiful channel of decomposed granite. The ground is so much altered that we can drive the end three times as fast as we could formerly, consequently we shall reach the counter lode a great deal sooner.

\$40,000." The No. 2 furnace is re-lining; it appears that owing to the former reports naming "one furnace re-lining," and then "three re-lining," the impression was entertained that all three had been repaired, the fact being that only two had then been taken in hand, and those not in the order of their distinguishing numbers; the runs for the past three weeks have thus been short, owing to the whole or partial stoppage of one of the furnaces during that time. Everything in connection with the mine and works at Eureka is reported to be working most smoothly and satisfactorily. The new manager (Mr. Reuben Rickard), who sails this week for Eureka, will thus on his arrival find nothing to distract his attention from the task of developing the mine and conducting the smelting and refining works with all the skill which his long experience has so well qualified him to exhibit. The present condition and prospects of the mine are reported to be equal to every expectation of the manager. The *Eureka Sentinel* of Jan. 7 has a long leading article written to establish the general proposition that the various mines on Ruby Hill possess characteristics which entitle them to be considered "as permanent as the Comstock itself."

"As the lode cut in the Richmond works, over 600 ft. below the outcrop, is 130 ft. wide, and yields black sulphuret ore assaying from \$300 to \$1000 per ton in silver, and carbonate ores in abundance that will produce \$80 to \$100 per ton by smelting process, there is good reason for believing that our mines are at least as permanent and reliable as are those of the exhaustless Comstock, though they may not be equal in extent."

The above extract indicates a great change in opinion in respect to the limestone stratum, the local prejudices being for a long time in favour of the unfounded notion that nothing but pockets, or beds of ore, could be expected in that formation. The delusion that the Richmond lode was only a great pocket, and, therefore, exhaustible, has, however, been dissipated at Eureka sooner than in this country, where the statement is still made in certain quarters, on the pretence of a friendly warning to shareholders. The developments in the Richmond lode, in the 600 ft. level, alluded to in the *Sentinel*, if they approach in size and richness of assay the statements given by the editor, indicate an amount of wealth very far beyond anything the authorities connected with the mine have ventured to state. Ore of the high assay indicated will have to be treated in a very different manner from that hitherto adopted in the huge existing furnaces, each smelting its 40 tons per diem, as much smaller ones, at a lower heat, will give larger returns from a less bulk of ore. The *Sentinel* reports, Jan. 7, that "The Richmond Company yesterday shipped, by Wells, Fargo, and Co., two silver bricks, weighing 150 lbs., valued at \$4196.43. They are consigned to New York." During the past week 90 tons of bullion were forwarded, thus making a total of 970 tons sent on to the refinery works since Dec. 1. The returns on 750 tons of refined up to the end of September have been received, and the result is about \$860 over the estimate by assay, the average per ton being \$333. Such accuracy in estimating the value of the gross bullion is remarkable, and highly satisfactory, as establishing a sure basis on which the bullion agents can make their advances and the shareholders calculate their profits. The total make of gross bullion this season amounts to \$1,615,000. The make of gross bullion since the end of August amounts to \$912,000.

Chontales, $\frac{1}{2}$ to $\frac{3}{4}$; a telegram has been received giving the result of December working, which we publish in another column. No doubt the labour question has prevented Mr. Smedley from bringing more ore to the stamps, but we understand that by the last mail, which left Southampton on the 18th inst., the directors sent out three experienced miners to superintend and direct the operations of the natives, by which system it is expected the force already at the managers disposal will be enabled to materially increase the monthly output of the ore.

Blue Tent, 5 to 5 $\frac{1}{2}$; a very satisfactory telegram has been received from the superintendent, announcing a partial clean-up on the Enterprise claim, after a short run of only 18 days, with a gross produce of gold to the amount of 60000. This augurs well for the future returns when abundant water is obtainable and the South Yuba claim also at work. A letter from the superintendent will be found in another column. Cedar Creek, $\frac{1}{2}$ to $\frac{1}{4}$; Col. Ludlum reports that he has sufficient water in the company's ditch to continue the washing on Yankee claim for a time, most likely until the rains set in. At date of last advices the weather was cold and dry, thus interrupting washing operations to a certain extent. Sweetland Creek, $\frac{2}{3}$ to $\frac{2}{5}$; the question of the future water supply is still unsettled. The superintendent, G. D. McLean, is using every effort to arrange another contract; meanwhile the claim is idle, as he cannot wash. The work on the tunnel is, however, progressing in a very satisfactory manner, the rock being easier. Several blasts of powder have been made in the bank, so as to be ready when water is obtained. Birdseye Creek, $\frac{2}{3}$ to $\frac{3}{4}$; the continuance of cold weather still hinders washing, but as soon as the rains commence Mr. Powers will be able to start also on the Stahr claim. They are making good progress in Pechey Tunnel, having only 185 ft. to complete. The last run hardly equalled the expectations of the superintendent, but he anticipates a much better clean-up next time. Everything is going on as usual.

St. John del Rey, 260 to 265; the mine continues to look well, and the yield is maintained quite equal to expectation. The profit for December is \$4000, and the produce for 11 days of January is 12750 oitavas, being an average of 1150 oitavas per diem. Sierra Buttes, original, $\frac{1}{2}$ to $\frac{2}{3}$; Ditto, Plumas Eureka, $\frac{1}{4}$ to $\frac{1}{2}$; London and Californian, 9-16th to 11-16th. Independence, 2 to $\frac{2}{3}$, and in demand. The prospects at this mine are most cheering, and it is rapidly approaching a dividend-paying state. The eastern shoot, since it was intersected, has been stoped for 150 ft. in length, and an average height of 30 ft., and the gold extracted from it to Dec. 31 last has realised 10,000. The pay quartz is holding down, and a cross-cut is being driven about 70 ft. deeper, which is shortly expected to meet with a continuation of this body of quartz. The shaft having been sunk to the required depth of 100 ft. in the middle shoot, and the cross-cut at the bottom of the shaft or 6th level having intersected pay quartz, the large body of pay quartz—quite 100 ft. high—which has been discovered by this cross-cut, and that driven into the shoot at the 5th level, will, when opened on, give full employment to an additional 30 heads of stamps.

Van, 20 to 22; a telegram late last night announces that the agent has just intersected the lode in the 90 fm. level cross-cut, strong and masterly, and rich for lead. A fine rush of water took place when the lode was cut. This is an exceedingly important discovery, proving that the mine is holding rich in depth. The 60 end west has improved, and is now worth 1000 per cubic fathom. Other parts of the mine unchanged. Van Consols, 2 to $\frac{2}{3}$; the lode sinking under the 25 fm. level is producing 3 tons of lead per fathom. The sinking of the main engine-shaft has been resumed, and it is daily approaching nearer the lode. The barytes mills are in full operation, and profitable returns most confidently being looked forward to. At Glyn Mine the new shaft is being sunk, so as to reach the lode as speedily as possible. At Great West Van the various points in the mine are valued at 800 per fathom. The next sampling of ore will be made on Tuesday. Assheton, $\frac{1}{2}$ to $\frac{1}{3}$; since the meeting, on Tuesday, these shares have met with enquiry; the resolutions for the division of the property were unanimously confirmed. Bog, $\frac{1}{2}$ to $\frac{2}{3}$; the 175 end, on the Whitestone lode, is still in rich ground; the level above is presenting favourable indications of entering the same run of ore ground as passed through in the 175. Other parts of the mine are looking well. The sale this month—60 tons lead—realised 9544.

Pennerley, $\frac{1}{2}$ to $\frac{1}{3}$; the report in another column is favourable. At Potter's Pit the ends in the 65 and 55 are presenting a promising appearance. The winze below the 55, and in advance of the 65 fm. level end, is worth 800 per fathom. The sale this month (80 tons) realised 12120. Grogwinon, $\frac{3}{4}$ to $\frac{3}{2}$; this mine is making its usual returns of 50 tons per month, which will be increased as soon as the communication has been made with the intermediate level. Wye Valley, $\frac{3}{4}$ to $\frac{3}{2}$.

Great Wheel Vor, $\frac{1}{2}$ to $\frac{2}{3}$; we publish in another column a report from the agents, being the first that has appeared since the stopping of the deep part in March last. The progress made in opening up the new part with the funds realised from the sale of a portion of the plant must be highly gratifying to those shareholders who have stood by the company through all its difficulties. Already the

agents are enabled to report having found good tin ground in the back of the 10 fm. level that will pay well to stop. We trust that as each level is drained of water the prospects may be equally encouraging. We understand that the part now proposed to be worked by the company is only 70 fathoms deep, and being on a continuation of the Metal lode, which gave such large profits to the shareholders some 10 years ago, there is every prospect of this mine becoming again highly remunerative. The costs being reduced to about 2500, or 3000, per month the funds of the company will go far to see the water out of the shaft, without calling on the shareholders for fresh subscriptions. Penstruthal, 12s. 6d. to 15s.; the mine is steadily developing, and regular fortnightly sales of tin being made. Cathedral, 20s. to 25s.; the four points of operation are valued at 800 per fathom. The manager, in his report, speaks confidently as to future prospects. Capt. Teague, of Tincroft, who has inspected the mine, also speaks favourably of the property. The report of the meeting appears in another column.

Subjoined are the closing quotations:—
Bog, $\frac{1}{2}$ to $\frac{2}{3}$; Carn Brea, 55 to 57; Devon Great Consols, $\frac{1}{2}$ to $\frac{1}{3}$ prem.; Dolcoath, 49 to 51; East Wheel Vor, 7 to 8; East Caradon, 1 to $\frac{1}{2}$; Great Laxey, 100 to 110; Hingston Down, 1 to $\frac{1}{2}$; Marke Valley, 1 to $\frac{1}{2}$; Pennerley, $\frac{1}{2}$ to $\frac{1}{3}$; Parys Mountain, $\frac{1}{2}$ to $\frac{3}{4}$; Penstruthal, $\frac{1}{2}$ to $\frac{3}{4}$; Roman Gravel, 12 to 14; Tincroft, 25 to 26; Tankerville, $\frac{1}{2}$ to $\frac{3}{4}$; Van, 20 to 22; Van Consols, 12 to 14; West Basset, $\frac{1}{2}$ to $\frac{3}{4}$; West Chiverton, $\frac{1}{2}$ to $\frac{3}{4}$; West Hill, 5 to 6; Almaden, 1 to $\frac{1}{2}$; Almaden and Tinto, $\frac{1}{2}$ to $\frac{3}{4}$; Birdseye Creek, $\frac{2}{3}$ to $\frac{3}{4}$; Cedar Creek, $\frac{1}{2}$ to $\frac{1}{4}$; Cape Copper, 29 to 31; Chontales, $\frac{1}{2}$ to $\frac{3}{4}$; Colorado Terrible, 3 to 4; Don Pedro, $\frac{1}{2}$ to $\frac{3}{4}$ dis.; Eberhard and Aurora, 4 to 5; Emma, 1 to 2; Flagstaff, 2 to 3; Frontino and Bolivia, $\frac{1}{2}$ to $\frac{3}{4}$; Gold Run, $\frac{1}{2}$ to $\frac{3}{4}$; Independence, 2 to 3; Last Chance, $\frac{1}{2}$ to $\frac{3}{4}$; Malpas, 15s. to 20s.; Malabar, 10s. to 12s. 6d.; New Quebrada, 3 to 3 $\frac{1}{2}$; New Pacific, 5s. to 7s. 6d.; Roca, $\frac{1}{2}$ to $\frac{3}{4}$; Richmond Consols, 1 to 1 $\frac{1}{2}$; St. John del Rey, 260 to 265; Sweetland Creek, $\frac{2}{3}$ to $\frac{2}{5}$; Sierra Buttes, 1 to 2; South Aurora, $\frac{1}{2}$ to $\frac{3}{4}$; Teconoma, $\frac{1}{2}$ to $\frac{3}{4}$; United Mexican, 3 to 3 $\frac{1}{2}$; Blue Tent, 5 to 5 $\frac{1}{2}$; Holcombe Valley, 1 to $\frac{1}{2}$; West Eagar Lile, 2 to 3.

COLLIERIES AND IRONWORKS.—The mid-January settlement, which was concluded this afternoon, disclosed a very moderate amount of transactions, and throughout the week prices have been dropping. The result of the meeting to-day of the South Wales Colliery Association of Masters did not transpire on 'Change, but little doubt is felt that the resolutions for locking out were confirmed, and a commencement made of what promises to be one of the most gigantic struggles ever witnessed between labour and capital. It may be brief, but that it will be severe few can doubt who have observed the weakened resources of the men, and the very irregular aid afforded them by the Unions now sadly hampered for want of funds. It is the men who are engaged in the steam coal and bituminous coal pits that appear the most dogged and determined; and considering that the exports of the former alone have advanced from 71,031 tons in 1841 to 2,342,792 tons in 1870, there can be no doubt but that soon much inconvenience will be felt, though as yet coals are cheap and abundant. Charlton Iron, 14 to 16; Chibwell Iron, 5 to 6; Ebbs Vale, 19 to 20; Iton Rhyn, 13 to 14; Rhymney Iron, 37 to 39; South Cleveland Iron, 8 to 10; New Sharstone, 7 to 9; Lehigh and Wilkes Barre Coal, 70 to 81; Merry and Co., 2 to 3; Nant-y-Glo and Blaenau, 37 to 42; Lydney and Wigpool, 13 to 23. The shares of Alltair Colliery have been in good demand; it is understood now that the value of the property of the company has been assured, additional land will be secured, and operations extended on a greater scale. Although the financial year does not expire before April, the accounts allow of an interim dividend, and one of 5s. per share has been declared this week. The capital is now 30,000. Shares close firm at 5 to 5 $\frac{1}{2}$. Richards and Co., 4 to 4 $\frac{1}{2}$; West Mostyn, 2 to 3; Chapel House, 4 to 4 $\frac{1}{2}$. United Bituminous shares are offered at 7s. 6d. Industrial Coal, 3 to 3 $\frac{1}{2}$; Skerrie Iron, 7 to 7 $\frac{1}{2}$; West Cumberland Iron, 11 to 12; Original Hartlepool, 8 to 8 $\frac{1}{2}$; John Bagnall, 6 to 6 $\frac{1}{2}$; Sheepbridge Coal, 52 to 53; Silkstone Fall, 1 to 1 $\frac{1}{2}$; Silkstone and Dodworth, 21 to 22; Earle's Shipbuilding, 17 to 17 $\frac{1}{2}$; Palmer's Shipbuilding, 24 to 25. Tenders are invited by the official liquidator of the Native Iron Ore Company for the machinery, &c., and interest in the leases, either in lots or a going concern. The price offered is for 1500 tons of ore lying unsold, which under the present circumstances will most likely have to be got rid of at a loss. Thorp's Gawler, 14 to 14 $\frac{1}{2}$; Cardiff and Swansea, 3 to 3 $\frac{1}{2}$; Bilson and Crump, 10 to 10 $\frac{1}{2}$; Welsh Freehold, 2 to 3; Newport Abercromby, 4 to 4 $\frac{1}{2}$.

At the Coal Consumers' Association meeting, held at Cannon-street Hotel on Wednesday, the report was adopted, also the recommendation of the directors to carry the rather heavy loss—some 11,000,—to the debit of capital account. Accompanying the report, the directors submit some lengthy remarks on the report made by the committee of investigation, which report the committee decided to circulate amongst the shareholders prior to the meeting. At the meeting of Letchford and Co. (Limited) the directors' report, recommending a dividend at the rate of 10 per cent. per annum, free of income tax (being at the same rate as the dividend for the previous half year), was adopted.

The report of the Northern Marine Insurance Company (Limited) recommends the usual dividend of 10 per cent. for the past year, and an addition of 11. per share to the paid up capital. The National Assurance Company of Ireland recommends a dividend of 5 per cent. The report of the Railway Share Trust Company recommends a dividend of 10 per cent. per annum, making 8 per cent. for the year. The report of the Railway Debenture Trust Company recommends a dividend of 8 per cent. per annum, making 7 per cent. for the year. The directors of the London and County Banking Company have decided to recommend at their meeting next week the payment of a dividend of 10 per cent. for the half-year ended December 31, after appropriating 15,000, to the reduction of premises account. This, with the June payment of 10 per cent., will make 20 per cent. for the year 1874. The amount to be carried forward will be 15,986. This compares with a similar dividend last year.

At Swansea Ticketing, on Tuesday, 1273 tons of copper ore were sold, realising 16,985. 14s. The particulars of the sale were—Average standard for 9 per cent. produce, 101. 17s. 6d.; average produce, 16 11-16; average price per ton, 13. 16s. 10d.; quantity of fine copper, 212 tons 11 cwt. The following are the particulars of the two last sales:—

Date.	Tons.	Standard.	Produce.	Per ton.	Per unit.	Ore copper.
Dec. 22	101	101	101	101	101	101
Jan. 26	1273	101	1273	101	101	101

Compared with the last sale, the decline has been in the standard 3/ 8s., and in the price per ton of ore about 11s. On Feb. 9 there will be offered for sale 1090 tons, from the Cape, Bampfyde, Union, Concordia, and elsewhere.

The CORSICAN MINING COMPANY has been formed, with a capital of 50,000, in shares of 50 each, to purchase for 30,000, (of which 50000 is taken in 5 per cent. debentures, redeemable in three years, and the remainder in fully-paid shares, so that none of the money subscribed goes to the vendors, and the whole will be applicable to working the property) a valuable mining concession at Linguizzetta, in the Island of Corsica, and to develop the copper mines therein. The property, 1600 acres in extent, is held under a lease granted by the original concessionaire, who holds from the French Government. The royalty payable is 2 frs. per ton of mineral extracted and imported. The mineral is extracted by open quarrying on the mountain side, so that no mining or pumping machinery will be required. Parcels of the copper ore have been sold at Swansea, and realised 11. 7s. 6d., 16s. 2d., and 48s. 7s. per ton. The company took over the property as from Sept. 1 last, together with 293 tons, more or less, of mineral extracted and ready for treatment; and which have been estimated to produce over 40000, when reduced to metal. This quantity is the result of eight months' working by 15 persons, at a cost of about 12000; and as 150 persons can at once be put to work, at the same rate they would produce 40,000, worth of copper in the same time; and, taking the whole cost of production at one-half of that sum, there would be left 20,000, as clear profit, or about 60 per cent. on the total issue of shares.

Mr. John Darlington in an exhaustive report upon the property states that the copper and copper ores are found in interstices of the breccia, and in the irregularities between the dividing planes. The metallic copper is divided into three classes, each occupying its particular locality, whilst the ores themselves consist of breccias of blue and green carbonates of copper stones and spangles of the purple sulphide of copper, and mixtures of these several kinds of ore with copper pyrites. The facilities for extracting the stone are very good. No over-burden to any extent rests on the copper-bearing rock, whilst the tip room is in every way satisfactory. The face of the hill is such that the main quarry may be widened in a natural way, or the quarry itself readily connected with the other quarries. No plant, in the sense of the term, is or will be requisite, only good boring tools, hammers, and shovels. He does not think it possible to produce any reliable calculations as to the costs and receipts which may be expected. The first night, under certain conditions of management, be somewhat closely approximated; but the second will obviously depend on the yield of the stone, which is never constant nor determinable by any ordinary method of sampling. The result of six months' working, as far as data is permissible, seems satisfactory. When, therefore, it is considered that the stone can be broken cheaply, and in large quantities, that the operations are not beset with the drawbacks incidental to shaft and level mining, it is reasonable to expect that remunerative results will attend an enlarged scale of operations, and that the property can be rendered one of a permanent character, and justify the amount of capital requisite for extension. The prospectus will be found in another column.

GROGWINON.—This mine continues to open out most satisfactorily. It is not long since that such difficulties presented themselves as almost to endanger the safety of the enterprise, and had it not been for the able and undaunted manner with which every obstacle was grappled with and successfully surmounted by the present Chairman (Capt. Ross, F.R.G.S.) the shareholders would not now have the opportunity of congratulating each other upon the possession of a property which gives indications of yielding profits for years to come. Eighteen months since its first sale of 20 tons of lead was made, from that time the returns have gradually increased up to 50 tons per month, and if practical opinions can be accepted as of any value at all, the output may be expected in a few months hence to reach 70 tons per month. As soon as the important works now in progress shall have been completed still further increased returns are reasonably anticipated, with a materially reduced expenditure. Additional evidence as to the profit-producing capacity of the mine was adduced at the meeting, on Tuesday (reported in another column), by no less an authority than

Mr. Thomas Sopwith, whose report and explanations cannot fail to be most re-assuring to all associated with the company.

BANTRY BAY BARYTES COMPANY.—The works here are in full operation under the new agent, and raising 200 tons of first quality per month. The demand for the stuff is very great, and if shipping could be obtained regularly the company would pay good interest. A vessel of 100 tons or more could be kept going between Bantry and Runcorn all the year round if it could be obtained.

TAN-Y-BWLCH MINE.—The 60 east, towards Assheton, is better than ever it was before, now worth, it is said, 1500 per fathom for lead, and drawing very close on Assheton boundary. This locality will be the great centre of Welsh lead mining in future. To the west of Tan-y-Bwlch is Pantgwyn Mine, and worked by the Gundrys; they have sunk since April last an engine-shaft from surface nearly to the depth of 240 feet, and are just cross-cutting the lode into a fine course of lead ore.

DISCOVERY OF A NEW COAL SEAM.—A seam of coal, 2 ft. 3 in. thick, was struck in the deep workings at Ifton Rhyn Collieries on Thursday. The discovery is considered to be of great importance, as proving the extension of the coal measures.

ORES, &c.

I BUY at the highest prices:—
LEAD ORES.—LEAD-SILVER ORES.—SILVER-LEAD ORES.
SILVER-LEAD.—HARD LEAD.—ANTIMONIAL LEAD.
GOLD AND SILVER ORES.
ZINC AND LEAD ORES MIXED TOGETHER.

Particulars by letter.

ARMAND FALLIZE, Ingénieur, à Liège (Belgium)

SALT LAKE CITY, UTAH TERRITORY, U.S. AMERICA.

WILLIAM BREDEMAYER,
MINING AND CONSULTING ENGINEER
U.S. MINERAL SURVEYOR.
Particular attention paid to Underground Surveys.
OFFICE.—KIMBALL BLOCK, SALT LAKE CITY.

D. ERNEST MELLISS, A.M., Ph.D.,
MINING ENGINEER AND GEOLOGIST,
52, BROADWAY, NEW YORK, UNITED STATES,
EXAMINES AND REPORTS upon MINERAL and other LANDS, MINES,
ORE BEDS, &c., either in or out of the United States.

Information furnished in regard to any of the American Mining Districts. Dr. MELLISS has had special experience in the Silver and Gold Mines west of the Rocky Mountains, and in the Coal and Iron Region of the Southern States.

Refers by permission to—W. BUTLER DUNCAN, Esq. (Duncan, Sherman, and Co.), New York; L. P. MORTON, Esq. (Morton, Bliss, and Co.), New York; MARK BRUMAGIN, Esq., President Mariposa Mining Company; JAMES B. HODGSKIN, Esq., Pres. U. S. Rolling Stock Company; CHARLES A. JOY, Ph.D., Prof. Chemistry, School of Mines, New York; FRIEDRICH WOHLER, Ph.D., Prof. Chemistry, Univ. Göttingen; SARTORIUS v. WALTERSHAUSEN, Prof. Geol. and Min. Univ. Göttingen; WALTER WILLIAMS, Esq., Creswell Hall, Stafford, England; JOHN J. CISCO, Esq. (John J. Cisco and Son), New York; S. L. M. OHLE, Esq., New York; C. P. HUNTINGTON, Esq., Pres. Chesapeake and Ohio Railway; CHARLES F. CHANDLER, Ph.D., Pres. New York Board of Health; J. A. NEWBERRY, M.D., Prof. Geology School of Mines, New York; RUDOLF FITTIG, Ph.D., Prof. Chemistry Univ. Tübingen, Württemberg.

RICHARD P. ROTHWELL, C.E., M.E.,
MINING AND CIVIL ENGINEER,
27, PARK PLACE, NEW YORK.

Vice-President of the American Institute of Mining Engineers; Member of the American Society of Civil Engineers; of the North of England Institute of Mining Engineers; of the Geological Society of France, &c.; &c.; Editor of the Engineering and Mining Journal, New York.

Reports on Mineral Properties, and on the Working and Management of Mines. ADVISES AS TO THE VALUE OF AMERICAN MINING STOCKS AND INVESTMENTS.

A thorough technical education and long practical experience in Mining in various parts of Europe and America, enable Mr. ROTHWELL to give SAFE ADVICE; and his position as Editor of the leading Mining Paper of America affords him unusual facilities for knowing the ACTUAL VALUE of American Mining Securities and the standing of companies.

References: The Presiding Officers of the American Institute of Mining Engineers, and the American Society of Civil Engineers.

CAPPER PASS AND SON, BRISTOL
ARE PURCHASERS OF
ANTIMONIAL OR HARD LEAD, LEAD MATTE, LEAD SLAGS, LEAD ASHES, SULPHATE OF LEAD, COPPER SLAGS, COPPER REGULUS OR MATTE, TIN ASHES, and TIN SCRUFF.
MIXED METALS and DROSS, containing LEAD, COPPER, TIN, or ANTIMONY.

A. H. KENRICK,
ENGINEER,
MINING MACHINERY AND METALS,
13, RUMFORD STREET, LIVERPOOL.

Commission Agent for the Sale and Purchase of Mining and other Plant.
FOR SALE, a 22-in. PLATE and SHEET TRAIN, complete; a 65-in. PUMP-ING ENGINE; a 4-in. WATER WHEEL; and a quantity of 8-in. PUMPS, &c.
WANTED, a quantity of 16 or 18 lbs. BRIDGE RAILS.

LONGDEN'S LIST.
FOR SALE:—
GRANITE QUARRY CORNWALL (sample can be seen).
TIN and COPPER SETS (good, and price low).
TWO CHINA-CLAY SETS (in work).

WANTED:—
ANTIMONY (in quantity), or a GOOD SETT.
COLLIERY with OUTPUT ONE THOUSAND TONS PER DAY.
COLLIERY yielding CANNEL.
HENRY LONGDEN, MINING EXPERT,
18, COLEMAN STREET, LONDON, E.C.

TO MINING COMPANIES, ENGINEERS, &c.
WANTED, an APPOINTMENT, by a Young Man (25), as MANAGER or ENGINEER'S ASSISTANT, or to TAKE RESIDENT CHARGE OF WORKS. Has had six years' experience in extensive deep iron mines, pumpwork, and general underground work, with machinery and steam power, together with the management of men. Good mechanical draughtsman and surveyor. References of the highest class as to character, ability, &c., and security if required.
Address, "M.E.," Watchet, Somersetshire.

COCKHILL AND SUNSIDE LEAD MINES,
PATELEY BRIDGE, YORKSHIRE.
WANTED, TWELVE SHAFTEMEN, to SINK the ENGINE-SHAFT 40 fms. below its present depth (namely, 5 fms. below the 20 fm. level), either by contract for the whole depth, or by day work, at 25 per man per month (six hours course), to relieve underground. To commence operations at One o'clock on Monday morning, and to finish on Saturday night at Ten o'clock. Testimonials to be forwarded to Capt. CHARLES WILLIAMS, Pateley Bridge, Yorkshire, or to the undersigned. All tools will be found, free of cost, and dynamite will be used. An experienced hand will be employed to charge and fire the holes.
43, Bishopgate-street, E.C., Jan. 29, 1875. R. TREDINNICK.

WANTED, A QUANTITY OF CLEAN FLUOR SPAR.—Apply, stating price, &c., to "X. Y. Z.," MINING JOURNAL Office, No. 26, Fleet-street, London, E.C.

WANTED, SECOND-HAND 18 in. PLUNGER PUMP, 9 feet stroke, 15 inch bucket pump 9 feet stroke, and about 35 fathoms 18 inch pump trees; also about 22 fathoms 18 inch PUMP.
Apply to Mr. WILLIAM C. FAGAN, 23, South Castle-street, Liverpool.

GOLD MINING.
A GENTLEMAN, of many years' experience in the practical Management of Gold Mines, and thoroughly conversant with the Treatment of Ores, OFFERS his SERVICES to those whose investments require the SUPERVISION of a PRACTICAL MAN. Unexceptionable references.
Address, "Alpha," 2, Windsor Villas, College-road, Haverstock Hill, N.W.

TO COLLIERY PROPRIETORS.
A GENTLEMAN holding a CERTIFICATE is open to a ENGAGEMENT as COLLIERY MANAGER.
Address, with particulars, "Topaz," MINING JOURNAL Office, 26, Fleet-street.

Notices to Correspondents.

RATING MINES.—I will thank some correspondent of the Journal for a reply, through your columns, to the undermentioned questions relating to the Mines Rating Bill, which has just come into operation on copper, tin, and lead mines. My questions will be confined to copper mining:—1. Has an assessor of a parish the legal right to value and rate the whole working plant of a copper mine?—2. Must he assess on the dues or royalty only?—3. Is it legal that he shall rate upon both plant and royalty?—4. Must he be furnished with the whole year's returns of the mine, whether it be copper lead, or tin?—COPPER PYRITES.

PROPULSION OF TRAMWAY CARS.—"R. J. O." (Hammer-smith).—The proposition to employ springs to propel tramway cars has not been abandoned, but as is the case with all new inventions, some difficulties have had to be surmounted, especially in obtaining springs of suitable size, strength, and temper. No statement has been published as to the relative economy of spring power and horse power for the purpose, nor has there been any estimate of the relative area that would be required with spring propellers and compressed air propellers of equal power. The workmen engaged in the construction of the spring propeller are sanguine of success, but say nothing of the distance that will be run without re-winding.

WIRE BELTING.—"H. V. U." (Strand).—A description of an improved form of wire belting, invented by Messrs. Greening, of Warrington, was published in the Journal of Jan. 2; but there was also another kind of belting described a few weeks previously, in which the wire was enclosed within textile coverings; it was exhibited at the recent Smithfield Club Show at the Agricultural Hall.

MINING PROFITS.—I wish to know what profit each of the following mines has made per share, and the amount per share paid, and shall feel obliged if some reader will oblige me with the information:—East Wheel Rose, Par Consols, Fowey Consols, Great Crinins, Perran Great St. George and Wheel Leisure, Wheel Music, also the mines in Gwynedd district.—READER.

THE IRON INDUSTRIES OF CUMBERLAND. BY RICHARD MEADE, Assistant Keeper of Mining Records.—To the returns of 1873, published in last week's Journal, should be added the hematite ore raised at Eskdale Mines, belonging to the Whitehaven Iron Mines (Limited), amounting to 6170 tons 4 cwt.

VALUE AND SALE OF MINERALS.—"S. and A." (Cambridge).—The information you require will be found in the Official Mineral Statistics, issued from the Royal School of Mines, and published by Messrs. Longman. The price is 2s. 6d. As to the addresses you ask for, the Bagillt Company's Works are at Bagillt, North Wales; Messrs. Richardson and Co. and Messrs. Vivian and Sons are at Swansea.

BLOWPIPE ANALYSIS.—"E. G." (Shrewsbury).—The Harkort's scale, printed in Dr. Cornwall's translation of Richter's edition of Plattner, shows the degrees or number of the transverse line on the left hand, and on the right are figures showing the equivalent in lots to the centner. It is mentioned, however, that the right-hand figures are seldom used. No table is given showing ounces to the ton, but there is one showing the equivalent in percentages of gold and silver respectively. As few chemists now use anything but the metric system, the table of percentages gives all that in laboratory work is required.

THE LLYWERNOG COMPANY.—As I have tried in vain to obtain information respecting the present position and state of this company from the Liquidator, appointed at a meeting, when Mr. Henry Potter was Chairman, held on Dec. 8, 1873, necessity compels me to appeal to you to find out whether a sale has as yet been realised, either as a going concern or otherwise. It is time, after a lapse of more than a year, that the shareholders should know all about the mine and its present state. It was stated by a writer in the Journal that this mine is now in other hands, and likely to become a paying concern.—AN OLD HOLDER.

WHEEL MARY.—We have received a long letter from Mr. W. J. Thompson, in which he enters very fully into a variety of matters connected with Wheel Mary, St. Dennis Consols, Capt. Parkyn, and others. As Mr. Thompson has prepared a pamphlet for circulation, in which he has treated on all the subjects enumerated, we do not feel called upon to insert his letter in the Journal. We regret the necessarily personal nature of the communication, and which, in a great measure, has compelled us to decline its publication.

Received.—"T. C."—"T. P."—"H. B."—"J. D. P." (Nevada).—"Investor" (Dublin).—"T. D. C."—"J. R."—"E. S."—"Stock Exchange" (Richmond).—"Shareholder" (Wheel Crebor).—"Shareholder" (Lovel).—"One Interested." Perhaps next week—"M. R." Certainly not—"X. Y. Z."—"E. P."—"Shareholder" (Assheton). Should write to the Secretary, who will forward the information—"G. S."—"J. T."—"H. C." Next week—"T. C." (Newport).

THE MINING JOURNAL,

Railway and Commercial Gazette.

LONDON, JANUARY 30, 1875.

CRISIS IN THE NORTH OF ENGLAND IRON TRADE.

One of the gravest and most serious crisis that the North of England has ever experienced is impending at the present time. On many previous occasions there have been individual rocks ahead, which threatened unmerciful disaster to the good vessel of industry, but at the present time the ship is surrounded with rocks of the most dangerous kind, and it will be matter for wonder, as well as for profound thankfulness, if on one or another she does not come to grief. A very decided and simultaneous step has been made by the employers engaged in the various departments of the iron and coal trades towards meeting the reaction which is carrying labour and capital back to their old relation of supply and demand. In all departments of labour substantial reductions of wages have been demanded. The ironstone mineowners of Cleveland have demanded 12½ per cent., or 2d. per ton, from their workmen. The pig-iron makers have sought a 10 per cent. reduction in the wages of blast-furnace men. The mineowners of Durham have applied for a reduction in the earnings of colliers, and the limestone quarryowners of Weardale have this week agreed upon a reduction in their workmen's wages. The prudence and discrimination manifested in the adoption of this simultaneous action towards meeting the altered circumstances of trade no one will be prepared to question. Its chief recommendation lies in the fact that one and all the different kinds of labour required in the production of pig-iron are under the same condemnation, and it is rightly concluded from this fact that there will either be a simultaneous strike or no strike at all. In the former case the masters will be likely to surmount their difficulties all at once. In the latter they will have justified the wisdom of their conduct by compelling one class to give way in obedience to the example and counsel of another. But whatever the ultimate consequences of the present emergency may be it is well worth while considering the circumstances that have more directly contributed to bring it about.

And, first, with regard to the ironstone miners of Cleveland. These are now a very influential and numerous body of men. Their labour is the basis on which the superstructure of Cleveland's industrial prosperity may be said to rest. They raise considerably more than a third part of all the ironstone produced in the United Kingdom, their total estimated output for 1874 being over 6,000,000 tons. Their power over the Cleveland iron trade is such that they can at a moment's notice disorganise all the springs of that industry, stop the production of the blast-furnaces, withhold the supplies of cast-iron from the makers of the finished article, and, worse than all, compel the almost complete stoppage of the coal trade of South Durham. It is fortunate that they have not yet manifested any very rampant desire to abuse this power. The organisation known as the Cleveland Miners' Union was only formed in 1872. Until last year, therefore, it had nothing to disturb its tranquillity, having been launched in smooth water, and carried forward by a prosperous gale. One advance was received after another until from 10d. per ton in 1871 the miners of Cleveland were receiving 1s. 4d. per ton last year. In May of 1873 they applied for a further advance of 12½ per cent., but this was refused. A suspension of labour followed. It was only, however, of a few days' duration, the miners agreeing with the masters, in obedience to counsels of wisdom, to return to work pending the adjustment of their claims by arbitration. Early in June Mr. KITTLE was called in to arbitrate on the proposed advance, and he found that, having regard to analogous remuneration in other parts of the North, the miners were not entitled to any advance. It was shown, in fact, that they were receiving about 7s. 6d. per day, and that the skilled miners had it in their power, by employing an unskilled helper, or "breaker-up," to increase their earnings to 9s. or 10s. per day. Wages, therefore, remained *status quo* until the month of April last, when the mineowners sought a reduction of 2d. per ton. A strike of seven weeks followed, and resulted in the triumph of the masters. The present is the second application of the mineowners to have wages reduced since the tide of prosperity began to ebb. The miners appear anxious to have the matter referred to arbitration, but this the mineowners are not likely to accept as a definite solution of the difficulty. There is a good reason why this should be so. The miners would, as on previous occasions, insist that their wages should be regulated either by the selling price of pig-iron, which has over and over again been suggested as the true solvent, or by the market value of the commodity they produce. Now, it is no secret

in Cleveland that only a very small proportion of the ironstone raised is free for sale, the great bulk of it being disposed of to pig-iron makers at a fixed rate over a number of years, and this rate, it is needless to say, is invariably much below the ascertained market value of the ironstone over the last four or five years. Hence the mere fact of a few thousand tons being sold here and there at a price which is ordinarily, and perhaps not erroneously, termed its market value proves nothing that the mineowners would be likely to accept as a basis, seeing that to meet the peculiar exigencies of their position they are compelled to sell the great bulk of their produce much below that figure. It is, in fact, of all things of its kind, perhaps, the most difficult to arbitrate upon. The executive of the Miners' Union have sought the counsel of the National Miners' executive, and by that, no doubt, their future conduct will chiefly be determined.

It is not expected that the blast-furnacemen of Cleveland will attempt to resist the reduction of 10 per cent. which the masters have demanded. A reduction of similar amount in the spring of last year led to a partial strike at the Clarence Works of BELL BROTHERS, but trade has fallen off, and prices have been reduced to a very considerable extent since that time. But, besides all this, the blast-furnacemen are not sufficiently well organised to meet the contingencies of a general strike, for it must be remembered that they do not in this matter act in sympathy or in unison with the finished iron workers, whose wages are arranged by the Court of Arbitration and Conciliation, which has been in existence for fully half a dozen years in the manufactured iron trade of the North of England. It is estimated that there are altogether about 6000 blast-furnacemen in the North of England. Happily the wages of the finished ironworkers are not liable to be disturbed in such a way as to involve any difficulties or complications before the end of June, seeing that until that time the Derby sliding scale, by which they are now regulated, will remain in operation. It is generally conceded that a substantial reduction in the wages of finished ironworkers is necessary to enable the makers of iron rails to compete successfully with their rivals in other districts, and more especially to give them a fair chance in competition with manufacturers of steel rails. The probabilities, however, of a decline in the cost of pig-iron and in the value of fuel will lead to a considerable difference of cost in both rails and plates, irrespective altogether of the price of labour. Steel rails are now quoted at Gorton, near Manchester, at 8s. 15s. per ton, or only 35s. per ton more than the price of iron rails in the Cleveland district; and if it is a fact, as we have heard over and over again that steel rails will last twice as long as iron ones, it is easy to understand why railway companies should prefer the former to the latter.

It is, however, from the reduction threatened in the Durham coal trade that the greatest difficulty is to be anticipated. It will be remembered that only in October last the Durham miners and their employers went to arbitration on a demand of 20 per cent. reduction by the latter. The umpire (Mr. RUSSELL GURNEY, M.P.) only allowed a reduction of 9½ per cent., so that the arbitration may be said to have resulted in favour of the miners. Since then, however, trade has undergone a substantial change for the worse. Prices have been pulled down all round until at the present time manufacturing coals are quoted at less than their value in the early part of 1872. The wages of the Durham miners are now fully 30 per cent. higher than they were in the latter part of 1871, but then their hours are so much shorter that it will be practically impossible for them to earn anything like the same wages now that they did then if the rate of remuneration is approximately near in both cases, and, of course, if the reduction of 20 per cent. is allowed to take effect there will be only 10 per cent. between the two points. In 1871 the miners worked on an average about ten hours per day, whereas they do not now work more than six hours daily. In addition to this, they only work every alternate Saturday, or no more than 11 days per fortnight, so that if one thing is added to another their present hours of labour are, probably, very little more than one-half what they were previous to 1872. This conclusion is, moreover, strengthened by a reference to the figures published by the Inspectors of Mines, showing, as they do, that the production of coal in Durham in 1873 was very little more than it was in 1871, although the number of miners employed in the former year was 20,000 more than in the latter, consequently it must appear obvious that the miners' position now, with very little more than the rate of remuneration allowed in 1871, cannot be so comfortable as it has been, and it is one of the heaviest penalties paid for the inflated prosperity of the years 1872-73 that working men should find their prospects so suddenly and completely changed. In the meantime, however, the reaction appears to be inevitable, and it only remains for employer and employed alike to "bear one another's burdens" in such a way as to mitigate the severity of the ordeal in which both alike are sufferers.

While it is impossible to ignore the fact that a serious crisis is at hand—a crisis complicated and intensified by what is now passing in South Wales—we have no sympathy for those whose idle croakings about the loss of industrial prestige, and whose alarmist views as to the chances of the future, are calculated to stagger all confidence in our national commerce, and fill with dismay the minds of investors who would otherwise be tolerably contented. Mr. LEXMAN, M.P., in speaking at York the other day, remarked that the present depression is only temporary. In this view we fully and heartily share, but we cannot avoid adding, by way of admonition, that its duration will be largely influenced by the establishment of a correct and amicable understanding between employers and employed. So far as Cleveland in particular is concerned, it is sufficient to find that up to the present time the pig-iron trade, which is the barometer of all the various ramifications of that industry, has been fairly prosperous, and that all the furnaces available for use are even now in full blast.

STAFFORDSHIRE, AND ITS MINING ENGINEERS.

In an attempt to anticipate the future of our colliery interest there is no sign more hopeful in its character than the display of a growing intelligent vigour in their calling amongst mining engineers. This Journal has always noted with the utmost satisfaction the indications of this, as afforded alike in the work done by existing mining engineers' institutes and by the founding of new societies with kindred objects. Nowhere in the kingdom has the lead which in this matter has been taken by the great Institute of the North of England been more creditably followed than in South Staffordshire. There for eight years has existed what is known as the South Staffordshire and East Worcestershire Institute of Mining Engineers. Its head quarters are at Dudley, and its numbers, increasing year by year, now amount to 238. It has a banked fund of 3400l., and the accounts presented at the annual meeting of the Institute last Monday, in the Geological Society's Museum, Dudley, showed a net credit of 4400l. It was this Institute, it will be remembered, which desiring to obtain, if possible, a hand coal-cutting machine offered a prize for such a machine during last year; and though no implement was forthcoming which was deemed likely to answer the purpose sought, yet the council liberally divided the premium of 200l. between two machines which competed. The trial with these tools cost the society 677l. The amount is not large, but considering the district and the object sought in its outlay, it exhibits a most praiseworthy spirit. But this is not all that the men of South Staffordshire have done in the past year. For the benefit of their members they have brought into their midst models of rock-drilling and mining apparatus of a first-class order, elsewhere proved of great value, and they have conducted experiments with dynamite and the newly-invented white gunpowder. Then, going from home to see what is being done in other districts, they in July last visited Barrow-in-Furness, its steelworks, and its hematite deposits. This they did after having in previous sessions gone, it will be remembered, to South Wales and even Belgium. Nor has the Institute restricted its investigations to subjects of a mechanical character. From time to time lectures upon the science of mining have been delivered to the members at some cost to the general funds, and there is now a desire on the part of the newly-elected president of the Institute (Mr. JOHN HUGHES) that his year of office may be signalled by the formation of a chemistry class. Seeing

that whilst all this has been going on there is in the immediate neighbourhood an association of no mean order, widely known as the Dudley Geological Institute, and remembering that in Wolverhampton there is an Institute of Mining, Civil, and Mechanical Engineers, and that recently a mining engineers' association, which has much in it which promises abundant success, has been formed in North Staffordshire, our readers will, we think, agree with us that the Staffordshire coal field may be expected to be wrought in the future in a manner not so likely to reflect upon the scientific attainments of those who direct the work as was at one time only too conspicuous.

Already there are striking indications of this. Mr. HUGHES, upon assuming the presidential chair, on Monday, fairly pointed to evidences of recent progress. He said: "The old style of winning mines is rapidly disappearing; the old and inconvenient shafts of 5 ft. diameter or less are being abandoned, and new ones sunk, in some instances from 12 ft. to 15 ft. diameter; the old kind of machinery is fast falling into disuse, and new and gradually improving machinery is being substituted; in fact, thanks to the improved intelligence of the country, we appear to be drifting into an altogether different state of things, which will be for the common good." We have before claimed for the South Staffordshire and East Worcestershire Institute of Mining Engineers much of the credit which is due for the enterprise that has resulted in the proving of the Thick coal outside the Staffordshire boundary at Sandwell. One of the earliest founders, one of the staunchest friends, and one of the most assiduous workers of the society is Mr. HENRY JOHNSON, who is the engineer of the Sandwell concern. We still believe that there is room to question if the Thick coal would, up to this day, have been found at Sandwell if it had not been for the Association of Mining Engineers of which we are now writing. And there are other members of the same institute, who, looking around localities also beyond the acknowledged coal boundary, and comparing notes, have devised and conducted operations which have gone far to give to South Staffordshire the promising aspect it now presents, by reason of the discoveries, also, in other directions on the south-west, and in other parts of the district. Recollecting all this, as he no doubt did, it should not be surprising that Mr. HUGHES expressed his want of sympathy with those men who have pronounced South Staffordshire as nearly worn out, and to have uttered his own conviction that the district "is in a far better condition as regards its coal supplies than it was ten years ago."

Mr. HUGHES does not look upon the Mines Regulation Act with much favour; nevertheless, he would have the members of the Institute of which he is now the head carry out its requirements honestly and fairly. Nor does he appear to attribute to the Mines Drainage Act much share in bringing about the improvement of which he speaks. For ourselves, we are disposed to contemplate the first as having stimulated the progress which the mining engineers have achieved, and we regard the second as likely to prove of more value with increasing years than the President of the Institute would seem to anticipate. The 407 collieries, which the authorised statistics inform us have produced in 1873 as many as 9,463,539 tons of coal, in South Staffordshire and Worcestershire will have added to them, when the returns for 1874 have been made up, collieries of great promise in altogether new localities—collieries which, moreover, will be worked in a fashion worthy of any district in England. And this state of things will go on developing itself for many years to come. The Sandwell Park discovery has already given rise to a project for working 1500 acres of the Perry Barr estate, belonging to Lord CALTHORPE. Mining engineers well and creditably known in South Staffordshire have declared the locality to have lying beneath it all the coals of the district; and recent drivings out from the Manor Pits, near Hales Owen, having indicated that the coal gradually thickens and improves in the direction of Cradley and Old Hill, until its ordinary distinctive quality is attained, have encouraged further sinkings. A trial sinking at the Two Gates, near Cradley, has proved at a depth of 160 yds. is a 9-yd. seam of coal, and at a further depth of 17 yards an excellent sample of the celebrated Stourbridge fire-clay is found to exist, in addition to the minor seams of Brooch and Heathen coal, and various ironstones, all of which are of good average quality. The success which has accompanied the sinking has led to the commencing of another not far distant, and to the making of preparations for sinking two 12-ft. shafts, and the putting down of a plant capable of raising 4000 tons per week. Other like instances might be cited. No wonder, therefore, that property on the outskirts of the old South Staffordshire coal field should have lately so vastly increased in value as to make land which a short time ago could be sold only for its surface worth now realise from 7000l. to 10,000l. per acre. The mineral outlook of South Staffordshire is decidedly cheering, and the well-directed energy of its mining engineers has had much to do with bringing this about.

AMERICAN ADVENTURES AND MISADVENTURES.

Things are still out of joint somehow in the United States. Some 16 months have elapsed since the suspension of the house of JAY COOKE and Co. occasioned what was known as the "great American panic," and still there is depression and comparative stagnation even in such long settled and ordinarily busy communities as the States of New York and Pennsylvania. We have long regarded Pennsylvania as the model industrial state of the American Republic—the state in which the laws of credit as recognised in Europe were the most respected, and in which labour toiled the most steadily. Yet even Pennsylvania seems to be in difficulties. The Pennsylvania Railroad Company is practising the most rigid economy; the Philadelphia and Reading Railroad Company, another great local corporation, is reducing the wages of its employees; and Governor HARTMAN, in his message to the State Legislature, which has just assembled at Harrisburg, speaks of idle workshops, of extinct blast-furnaces, of "myriads" of unemployed. The Great Republic has an immense territory, vast natural resources, and a population of 43,000,000 or 44,000,000. Yet the Great Republic seems depressed and uneasy; her present is troubled, although her future may yet prove prosperous.

What is the cause of all this? It appears to us to be an absence of a full appreciation of the economic laws which regulate the civilised world. Labour, perhaps, does not war with capital in the United States to a greater extent than in the United Kingdom; but property is more respected, and the laws for its protection are more stringent and effectual on this side of the Atlantic than among the Americans. For instance, when a security for money is created in Great Britain it is, as a general rule, rigidly respected, and, what is more, stringently protected. We do not mean to contend that there have not been financial scandals in London, and recently, too, but there has generally been an American element in these shameful doings. These scandals are trifling in number, moreover, as compared with those with which the great Transatlantic Republic abounds. The recent course of several of the southern American States has been simply shameful. What shall we say of the finance of North Carolina, of South Carolina, of Louisiana, of that old offender Mississippi, and of such comparatively new defaulters as Alabama and Virginia? Virginia pleads poverty, and makes some appearance of payment, but her financial position is as discreditable as it is unsatisfactory. Alabama seems disposed to follow the example of Louisiana, and shrivel up her debt into just about the amounts which, for the moment, she is good enough to be disposed to pay. The bonds of North Carolina and South Carolina are almost waste paper, and the attitude of those States is simply contemptible. These things cannot, of course, be without inflicting enormous injury upon the whole American nation, followed, as they are, by a long list of "defaults" of interest on the part of "premature" American railroad companies. At present it may be said that the living have to pay for the dead in the United States in financial matters, and that industry suffers in consequence. For instance, we find such powerful American railroad corporations as the Pennsylvania and the Baltimore and Ohio obliged to pay an interest of 6 per cent. per annum, or thereabouts, upon their loans, while the populous, and hitherto progressive, City of Cincinnati is fain to promise somewhere about 7½ per cent. per annum upon its municipal bonds. In short, from one end of the United States to the other we appear to meet with financial disorganisation—a disorganisation complicated and

aggravated by a vast paper currency. What is wanted by the Americans is a prompt return and a rigid adherence to the recognised economic laws of the Old World.

COAL AND IRON IN THE UNITED STATES.—A mill at Columbus, Ohio, has secured a contract for rails for a local railroad company, at \$53 per ton. This rate is said to be \$3 per ton lower than the corresponding prices at which English rails can be delivered at the same point. The weight of the rails per yard on the main track of the New York Central and Hudson River Railroad—all steel—is 65 lbs. per yard. The Mount Hope Coal Mine at Portsmouth, Rhode Island, is said to contain the hardest anthracite coal in the United States. It is much lighter coloured than the ordinary anthracite, and in many places it resembles plumbago. The mine yields about 15,000 tons per annum, and it is pretty good fuel. Large quantities of this coal are consumed in smelting copper from Chili. The probable area of coal lands in Colorado is estimated at 100,000 square miles, a larger space than the six New England States.

THE FIVE GREAT EXHIBITIONS.—The Great Exhibition of 1851, held in London, was opened on May 1, and remained open for payment for 141 days. The number of visitors was 6,039,195, and 424,322, was received for admissions. The Exposition Universelle of 1855, at Paris, was opened on May 15, and remained open 200 days, Sundays included. The number of visitors was 5,162,330, and 128,090, was received for admissions. The International Exhibition of 1862, in London, was opened on May 1, and remained open 171 days. The number of visitors was 6,211,103, and 408,530, was received for admissions. The Exposition Universelle of 1867, at Paris, was opened on April 1, and remained open 217 days, Sundays included. The number of visitors was no less than 8,805,969, and 420,735, was received for admissions. The Universal Exhibition of 1873, at Vienna, was opened on May 1, and remained open 186 days, Sundays included; the number of visitors was 6,740,500, and 206,478, was received for admissions. Thus the total number of visitors at the five great International Exhibitions was 32,959,097, a greater number than the entire population of the United Kingdom enumerated at the Census of 1871, and 1,588,164, was received for admissions. The progress medal, as it was termed at Vienna, for the greatest number of visitor in one day, belongs to the Exposition Universelle of Paris in 1867, when 173,923 persons passed through the turnstiles on Sunday, Oct. 27. The Vienna Exhibition was a good second with 135,674 on the closing day, Sunday, Nov. 2; Paris in 1855 comes next with 123,017, on Sunday, Sept. 9. Then comes the London Great Exhibition of 1851 with what was then thought the extraordinary number of 109,915 on Tuesday Oct. 7, four days before the close; and lastly, London in 1862 with 67,891 on Thursday, Oct. 30. We wait now for the great Exposition at Philadelphia in 1876.

REPORT FROM CORNWALL.

Jan. 28.—We have had a drop in the tin standard, made after the fashion which has been so often condemned, without previous announcement. It needs no argument to show that this style of doing business is most unjust to the mines. On the faith of a certain price officially quoted a parcel of tin is taken to the smelting-house, and when it is there the seller finds that instead of the standard he expected to receive he has a couple or three pounds less. Placed under such circumstances a mine manager can hardly help himself. If he had known the price before he started he might have decided upon stocking, but when the tin is at the smelting house it generally stops there. We have known cases in which it has been taken back to the mine when the price offered has not been up to the mark, but they are rare. If the official standards mean anything let them be adhered to, and changed as it is deemed necessary. For some time before the year closed it is well known that higher prices were obtained than were quoted officially. This might not have done much harm to those who were thoroughly acquainted with the circumstances, but it was calculated to give rise to false impressions, from which in the long run somebody must suffer. If there are to be official standards at all let them mean what they say.

Why the standard was dropped is a question easier asked than satisfactorily answered. Undoubtedly the market has been dull, but then the demand continues good, and the effect of the heavy rainfall in Cornwall has been very materially—for the time at any rate—to check production. Possibly the solution of the problem is to be found in the fact that when it was known in Australia that the standard had advanced last October pretty well all the block tin in stock was shipped off at once. This will be now arriving, and being thrown on the market must naturally pull prices down. Perhaps the smelters want to "encourage" Australian production after the manner in which tin mining at home has been encouraged. If so, let us for once hope they will be successful. Anyway, the fall can be but temporary, and there is no reason to despair that all our anticipations of a good figure for tin before many months have passed will yet be fully realised, as everybody only too well knows it is sorely needed.

The past week has been a little more favourable so far as the weather is concerned. We are by no means free from rain, but the rain has neither been so continuous nor so heavy as for some weeks previous, and the mines, therefore, have a better chance of overcoming their water difficulties, which in some cases, as we have heretofore stated, have been of a very serious character. Some stream works have been fairly washed away by the flood-water, so that it is not mines only that have had to suffer. Let us trust that under the present circumstances we are not going to have coal advanced. The horizon in Wales looks more cloudy than we had hoped, and it hardly seems possible that a prolonged struggle can be averted.

The miners at Morvah Consols have taken the law into their own hands, after the fashion adopted heretofore in the West. The affair has so far come to grief that it is in the hands of the Sheriff's officers. The miners invoked the aid of the Stannary Court to secure the wages due to them, but without result, as they were too late. They then resolved to help themselves, and so, when the auctioneer went to the mine to sell off, prevented his having access to the property for the purpose. But, of course, this only puts off the evil day, and, moreover, is not only illegal but dangerous. Nobody can guarantee that on such an occasion opposition may not assume a more objectionable shape than the semi-passive resistance adopted in this instance.

Capt. Teague, jun., has started the idea of an association of mine agents and managers, not at all after the fashion of, or in competition with, the Miners' Association, but more in the style of an agricultural exchange. The idea is certainly a good one, for one of the things that Cornwall has had to deplore is the want of united action among this very class, and if Capt. Teague's proposal turns out to be workable it will do good service. It is more likely to be valuable in this direction than in that of actually promoting the interests of practical mining, for which existing institutions, if properly supported, would very adequately provide.

There is some controversy going on with respect to the Royal School of Mines and South Kensington—the latter department, apparently, having a hankering after the Jermyn-street establishment, and in its anxiety for concentration being desirous of swallowing that up likewise. A defender of the Mining School contends that the Museum in Jermyn-street is well adapted to the purposes of the School of Mines, whilst there is a manifest advantage in the connection of the Museum with the School; and that what is needed is the severance of the connection between the School of Mines and South Kensington. "Let the school be strictly and exclusively a School of Mines, and confine itself to the instruction of students in the particular branches of applied science—mineralogy, paleontology, geology, mining, and metallurgy. Let every student have the option of acquiring the requisite preliminary knowledge of the sciences of chemistry and elementary mechanics at South Kensington or any other school having professors of acknowledged ability and position, the certificates of competency from such professors being received as of equal authority with those of the teachers of South Kensington. The School of Mines has suffered much from the intermeddling of persons ill qualified for the discharge of such a function. More than once its name has been changed, and its scope

also expanded and contracted, but in every instance with unfavourable consequences for a season. It has now reached the 24th year of its existence, it has had its ups and downs, and after much struggling has for some years past been steadily progressing; and that it has at length secured the confidence of the public is shown by the fact that its students were never so numerous as at present. Why should well not be let alone?" From another quarter the very practical suggestion comes that a course of study should embrace not only study at the School, but periods passed actually in a metalliferous or coal mine, as the case might be, in smelting works, and in the study of field geology. Such a course would be thorough, and this controversy is likely to do good.

REPORT FROM SCOTLAND.

Jan. 27.—The Pig-Iron Market has been rather irregular since the date of our last report, and a considerable amount of business has been transacted. A gradual improvement took place in warrants towards the end of the week, and as high as 75s. was paid on Friday, closing on that day at 74s. 6d. On Monday a reaction took place, and a large business was done from 74s. 3d. down to 73s. 6d. Yesterday the market opened flat, and one transaction took place at 72s. 9d. cash; the tone afterwards became stronger, and closed with buyers offering 73s. 6d. To-day there has been little or no business done, and the closing price is nominally 73s. 9d. The shipping demand is pretty fair, considering the season of the year, and a slight advance has taken place in the prices of some favourite brands.

G.m.b. at Glasgow (deliverable alongside)	No. 1.	No. 2.
Gartsherrie ditto	75s. 6d.	70s. 6d.
Coltness ditto	75s. 6d.	70s. 6d.
Summerlee ditto	75s. 6d.	70s. 6d.
Carnbroe ditto	75s. 6d.	70s. 6d.
Monkland ditto	75s. 6d.	70s. 6d.
Clyde ditto	75s. 6d.	70s. 6d.
Govan, at Broxmirelaw ditto	75s. 6d.	70s. 6d.
Langloan, at Port Dundas ditto	75s. 6d.	70s. 6d.
Calder ditto	75s. 6d.	70s. 6d.
Glenarnock, at Ardrossan ditto	75s. 6d.	70s. 6d.
Eglinton ditto	75s. 6d.	70s. 6d.
Dalmellington ditto	75s. 6d.	70s. 6d.
Carroll, at Grangemouth, selected, ditto	75s. 6d.	70s. 6d.
Rhotts, at Leith ditto	75s. 6d.	70s. 6d.
Kilmall, at Boness ditto	75s. 6d.	70s. 6d.
Bar iron	75s. 6d.	70s. 6d.
Nail rods	75s. 6d.	70s. 6d.

Week ending Jan. 23, 1875	Tons	Value
Week ending Jan. 23, 1875	7,934	6,532
Increase	1,402	4,665
Total imports for 1875	4,665	
Imports of Middleborough pig-iron into Grangemouth:—		
For the week ending Jan. 23, 1875	5,075	
For the week ending Jan. 24, 1874	2,954	

Iron merchants have got into a quandary, and are dealing with an erratic market. Last week they had first to meet a reduction in makers' prices, which brought on a considerable business in special brands, but were checkmated by an advance at the end of the week on the same iron, which has had the effect of lessening operations, and makers now talk of strong prices. A good business is reported to have been done for forward in the interval, but the market is shifty, and the "ring" are operating. The forecasts of the spring trade which have been made by some of the more experienced brokers are more conflicting than satisfactory, although it is to be borne in mind that the reports from foreign markets show small stocks of Scotch iron on hand, and this is specially the case with Germany and America. There is no change to note in the dull and unprofitable nature of the Finished Iron Trade. Some of the large works have not commenced this year yet, the others are on about one third time, and, withal, the smaller makers have not improved. Sheets have been done here this week as low as 11s. 10s., which indicates the state of the trade. The Admiralty are inviting tenders in this market for angle, T, bulb, and bar iron for Her Majesty's dockyards, under a standing contract; and while there will be willing offers from this district, even if successful, it will be some time before the contracts can be placed.

The scarcity of wagons in possession of our mineral carriers is affecting the trade so much that this afternoon the Wishaw coalmasters held a meeting for the purpose of devising means by which the evil may be remedied. We believe that in the first instance a representation will be made to the Caledonian Company, requesting them to immediately increase their plant to be equal to the traffic, and on their refusal the coalmasters will offer to provide additional wagons on condition that the railway company will reimburse them for their outlay. Failing their acceptance of either of these alternatives, the Wishaw traders mean to apply to the Railway Commissioners to enforce redress.

It may be also stated that, as we hinted a few weeks ago, the North British Railway Company have been summoned to appear before the Railway Commissioners, at the instance of certain coal masters of the Airdrie and Slamannan districts, who complain that railway gives special traffic facilities to Messrs. Wm. Baird and Co. The traders of the district have long complained that the North British Company have granted differential rates for coal traffic to that firm, and have raised this case to test the matter. Should the question be heard by the Railway Commissioners it will raise certain delicate and important points, which will also affect the Caledonian and South-Western Railway Companies.

The difficulty of getting the coal from the pits to the depôts and the loading berths is giving an artificial impetus to the trade, and prices are maintained. This is the case not only here, but is the same both at the Ayr and Fife ports, where the deliveries have fallen into arrears. During the week the shipments were 44,396 tons, against 30,993 tons in the same week of 1874. The Carnwath miners have been reduced 1s. per day, and are on strike in consequence.

At the Fairfield Association meeting Mr. G. Newall read a paper "On Steam Jackets," in commencing which he traced briefly the history of its application since its invention by Watt in 1769 till the present time, and proceeded to consider its theoretical action and practical application in the saving of fuel. Mr. Newall proved in a satisfactory manner, even to the opponents of the steam jacket, its necessity and usefulness as an economiser of fuel, and expressed a conviction that shipowners were fully alive to their own interests in so generally insisting on its adoption in marine work.

THE SCOTCH MINING SHARE MARKET—WEEKLY REPORT AND LIST OF PRICES.

During the past week there has again been a large business transacted, and the reduction of 1 per cent. in the Bank rate to-day (now 3 per cent.) will, doubtless, keep business brisk for some time to come. In iron and coal shares, Bolckow, Vaughan A. Cairntable, and Marbella show slight improvements, while such of the others as have varied are to lower prices. Merry and Cuninghame, after touching 56s., improved to 62s., on the statement that there is no call to be made, but are now 59s. In copper, &c., shares, prices when changed are to lower quotations, excepting Tharsis, which improved to 233, but are now the same as last week. The reports have been issued of the Canadian Copper Pyrites and Glasgow Caradon Companies, and will be found after my report of Saturday's business; they caused depression in the shares of the respective companies, the pyrites shares touching 29s., but have since rallied, while Caradon shares touched 22s., though now firmer at 25s. The clause in the report about the lease being so near expired seems to have caused needless alarm to some holders. In Americans, Emma's have again been decidedly firm, and are higher; no change in others. Oil shares are still very flat, Midlothian being $\frac{1}{2}$, and West Calder 3, each lower on imperative orders to sell at any price. In miscellaneous the business has been confined to Scottish Wagons, which are firm on a dividend of 8 per cent. being recommended. A detailed list of the several days' business follows:—

On Thursday last a good business was done. Benhar done at 15s. Canadian Copper Pyrites done at 32s. 6d. and 33s., closing 32s. to 34s. Emma's done at 32s., closing 31s. 6d. to 32s. 6d. Port Washington again lower, offered at 82s., and all-paid shares at 57s. Huntington done at 57s. 6d., closing 56s. 6d. to 57s. Marbella, $\frac{1}{2}$ to 5s. Merry and Cuninghame were very largely dealt in, the severe fall having attracted numerous buyers; opening at 64s., they steadily advanced to 65s., but close easier at 60s. 6d. to 61s. The all-paid shares

changed hands at 94s. Monkland ordinary done at 75s. 6d. and 75s., closing 74s. 6d. to 75s. 6d. Niddrie done at 70s. and 69s. 6d., closing 69s. to 69s. 6d. Tharsis done at 233, but advanced to 234, closing 233 to 234. New shares done at 16, closing 16 to 16 $\frac{1}{2}$. Scottish Wagons, 12 to 16 to 12 $\frac{1}{2}$. York Peninsula ordinary unchanged at $\frac{1}{2}$ to $\frac{3}{4}$, and guaranteed preference all paid at $\frac{1}{2}$ to 1.

On Friday last a fair business was done, though not so large as has been for the last few days. Arncliffe done at 64s. Benhar done at 15, closing 14 $\frac{1}{2}$ to 15. Cairntable done at 64s. Canadian Copper Pyrites opened at 32s. 6d., and advanced to 33s., but again declined, and close 32s. to 33s. Dunsley Wheat Phenix, $\frac{1}{2}$ to $\frac{3}{4}$. Ebbw shares done at 19 $\frac{1}{2}$, closing 19 $\frac{1}{2}$ to 20. Emma shares opened at a slight decline, being done at 31s. 6d., but close firm again, at 32s. 6d. to 33s. 6d. Glasgow Caradon shares done at 31s. Port Washington shares again weak, being offered at 41s. Marbella shares lower, done at 98s. 6d., closing 98s. 6d. to 99s. 6d. Merry and Cuninghame done from 61s. to 59s. 6d., closing 61s. to 62s.; it is understood that there is no truth in the rumour of a call being about to be made; this was the only cause of the decline. Monkland ordinary shares done at 74s. and 73s., closing at these prices. Niddrie shares done at 69s. 6d., closing 69s. to 70s. Onna and Cleland shares done at 23s., closing 45s. to 47s. Tharsis shares done at 23 9-16ths and 23 $\frac{1}{2}$, closing firm at these prices. York Peninsula ordinary shares, $\frac{1}{2}$ to $\frac{3}{4}$.

On Saturday the business done was smaller. Canadian Copper Pyrites and Glasgow Caradon shares were weak, on the annual reports just issued being unfavourably received. Canadian Copper Pyrites done at 31s. and 30s. 6d., closing 31s. Dunsley Wheat Phenix, $\frac{1}{2}$ to $\frac{3}{4}$. Ebbw Vale shares done at 19 $\frac{1}{2}$, closing 19 $\frac{1}{2}$ to 20. Emma shares good, done at 32s. and 33s., closing 32s. to 33s. Glasgow Caradon shares flat, done at 29s. 6d. and 28s. 6d., closing 28s. to 29s. Highland Peat Fuel shares firmer, at 6 $\frac{1}{2}$ to 7 $\frac{1}{2}$, on the announcement that the petition to wind up the company lately instituted by an English firm has been dismissed. Marbella shares done at 98s. 6d., closing 98s. to 99s. Merry and Cuninghame shares done at 60s., 60s. 6d., and 61s., closing 60s. 6d. to 61s. Monkland ordinary shares done at 34s., closing 74s. to 76d. Niddrie, 69s. to 69s. 6d. Onna and Cleland, 45s. to 46s. 6d. Tharsis shares done at 23 $\frac{1}{2}$, closing 23 $\frac{1}{2}$ to 23 $\frac{1}{2}$. Scottish Wagon shares done at 12 $\frac{1}{2}$, closing firm at 12 $\frac{1}{2}$ to 12 9-16ths. York Peninsula ordinary shares in demand, done at 5s. 2d., closing 4s. to 5s.

The directors of the Glasgow Caradon Consolidated Copper Mining Company (Limited) have just issued their annual report (fifteenth), with profit and loss account and balance, as also agents' report for past year (dated Jan. 19), to be submitted to the general meeting of shareholders on Feb. 1. These state:—Every effort has been made to push on the work at the mine with the utmost vigour. The lode in the 78 has not continued so good as was expected, but a cross-cut has been driven south, with the view of cutting what was believed to be the main ore-bearing part of the lode, and from what has been seen in the levels above it is expected it will prove valuable. This falling off affected to some degree the sales of ore during the year; they were 2652 tons, realising 14,421. 15s., which is 57 tons less than last year, but the price realised is 268. 6s. 3d. more than last year, and had it not been for the low standard early in the year the returns would have been very much larger. The falling off referred to also increased the dead work, and so brought the costs higher than they otherwise would have been, by causing more ground to be driven in proportion to the ore raised. The agents consider it absolutely necessary to commence operations for sinking the new shaft from surface, and completing and casing it down to the 78 fm. level. Seeing that the present lease has only six years to run, the directors considered it desirable to communicate with the lords (Messrs. Elliott) as to its renewal before going on with these operations. The Messrs. Elliott, who have always met the company in a liberal manner, have expressed their willingness to renew the lease on condition that the eastern portion should be worked. As this part of the shaft cannot be reached from present workings, and the capital of the company will not admit of making the outlay which would be required, the Messrs. Elliott have offered, if a new company be formed, to incur in an arrangement by which this portion of the shaft might be taken over, and a lease granted for the respective portions. A resolution in order that such an arrangement may be carried out will be submitted to the meeting, as, in the event of this piece of ground being worked and found to contain good lodes, which there is every reason to expect, the value of the company's property would be materially increased. The balance at credit of profit and loss is £354. 12s. 4d., from which an interim dividend of 5 per cent. has been paid, and the directors recommend that a further dividend be now declared of 7 $\frac{1}{2}$ per cent., making 12 $\frac{1}{2}$ per cent. free of income tax, for the year, leaving 667. 11s. 3d. to be carried forward to next year's accounts.

Judging from the movement of the shares (32s. each before the report was issued, now weak at 28s.), this report seems to have been unfavourably received; certainly, the disappointing state of the lode in the 78 is serious, but the agents state that they have cut in south and found another part of the lode, which they hope will lead to better results. Perhaps, on the whole, there is too many "hopes" and "expectations" in it. I do not think, however, that sufficient attention has been paid to that portion of the report saying "that had it not been for the low standard early in the year, the returns would have been much larger," as probably few of the shareholders examine into the monthly sales of ore close enough to realise the extent of this; the facts are that while the sales in January, February, and March last year only realised an average per ton respectively of 67s. 6d., 62s. 1d., and 78s. 2d., the three last sales realised averages of 125s. 6d., 112s. 7d., and 113s. 7d., or a total of more than 200 tons, which on the three months' sales of 1975 (75 tons) amounts to a loss of dividend of 5 per cent. The part of the report relating attention to the lease being so near expired may also have alarmed some, but there need be no alarm on that account, as the company have no doubt as to its being renewed satisfactorily to them; the clause referring to it in the report having been inserted by advice of the company's solicitor, it being necessary that the directors should take power to arrange for its renewal, and a notice had, therefore, to be given. Taken as a whole, the report is by no means discouraging to those who have invested in Glasgow Caradon shares as investment, though those who have bought them speculating for an immediate rise, will doubtless feel disappointed.

The second annual report has just, also, been issued, with accounts by the directors of the Canadian Copper Pyrites and Chemical Company (Limited), to be submitted to the third ordinary general meeting of shareholders, on Jan. 29. It states:—The directors deeply regret they cannot show a more satisfactory state of affairs than last year. The loss for the period ending Sept. 30, 1873, was the sum of £6887. 13s. 11d., and this has been increased during the past financial year to the sum of £11,113. 16s. 11d. A considerable portion of this was incurred in the metal extraction works, owing mainly to the difficulties inherent in starting works in a new country. All expenditure in exploring and developing the mines during the past year has been debited to profit and loss account. The expenses of management have been considerably reduced, and all unprofitable expenditure at the mines has been stopped. Operations during the past year have been confined to the Acton, Capel, and Hartford Mines. At the Acton Mine, after expending over 2000. In exploring without satisfactory results, the directors suspended all operations at that mine last, and do not deem it advisable to incur further expenditure at present. The greater portion of the machinery has been removed to Hartford Mine and the metal work, where it can be usefully employed. A very large quantity of refuse on the mine is being experimented upon, to see whether the small percentage of copper it contains may be utilised. At the Capel Mine work is at present suspended, but during the months of October, November, and December, 1873, 553 tons of ore were produced of an average produce for copper of 4 $\frac{1}{2}$ per cent. At the Hartford Mine the produce from No. 5 shaft for the year was 8817 tons of precipitate produced. The cost of extraction was 69s. per ton of burnt ore; but by using only wood fuel and introducing many other improvements, this was reduced to 4s. per ton of 5 per cent. ore in October and November last, and steps have been taken which will ensure a further considerable reduction. Mr. Chadwick was sent out in the beginning of December to look after this department of the company's business, and as he is thoroughly acquainted with the wet copper process, the directors anticipate profitable results in future. There is still considerable difficulty in deciding as to the best mode of utilising the sulphur in the ore, and in consequence of the apparent success of new processes for manufacturing sulphate of soda the directors have hesitated to erect vitriol chambers. The difficulties encountered in getting the metal extracting works into a satisfactory condition was the cause of further delay, as the directors did not feel justified in expending more of the shareholders' money on works until they were certain that those already erected would yield a fair profit. The question of building works, either in Canada or in the United States, for the manufacture of sulphuric acid, artificial manures, or other articles, is being carefully considered by the directors, and Mr. Breen is collecting full information for their guidance. Two of the directors, Messrs. Henderson and Breen, visited Canada last summer, and inspected the companies' properties and works, and at the request of his co-directors, Mr. Breen returned there in the month of November last to hasten the completion of the works and look after other important matters. His mission has been very successful thus far, and the directors anticipate the best results from it. On Oct. 13 last the directors, in consequence of the injurious rumours in circulation, addressed a letter to the shareholders on the position of the company. That letter, in making a distinction between the various properties, may admit of the interpretation that the directors were satisfied that the Hartford and Capel, and possibly the Acton Mines came up to the representations of the vendors. Such, however, is not the case, nor was it the meaning of the directors; and the statements in this report must be taken with the same qualification. The bill in Chancery against the vendors has been pushed on as rapidly as the complicated circumstances of the case, and the delay which is unavoidable when one of the defendants is resident abroad, have admitted; and the directors hope shortly to be in a position to report a satisfactory result of the suit to the shareholders. The directors have also instituted actions for misrepresentation in respect of the sale to the company, both against the vendors mentioned in the prospectus, and the original proprietors of the properties. This report is not, of course, what the original prospectus of the company would have led shareholders to expect; but the course matters have since taken cannot cause it to be looked upon as disappointing, and it is evident the directors are doing everything in their power to further the interests of the company, and will doubtless have thoroughly tested the dividend earning capacity of the companies' properties in another year. The company has twelve mineral properties, extending to 10,912 acres, chiefly situated in the eastern townships of Lower Canada; they are chiefly freehold, and exempt from all dues and royalties. Some of them lie alongside the mines and properties of the Huntington Copper and Sulphur Company (Limited), and 200,000 of this company's share capital is reserved for future issue, should suitable arrangements be made with the shareholders of that company for acquiring

their mines and properties. The 7½-pd shares are at present selling for about 30s. each, and present a very fair progressive investment.

On Monday a large business was done, and the market was animated. Benhar done at 15, closing 14½ to 15. Canadian Copper Pyrites opened at 20s, but gradually improved to 21s, closing 21s to 22s. Dunsley Wheel Phenix done at 4s, closing 4s to 5s. Emma done at 34s, 35s, 6d., and 35s, closing 35s to 36s. 3d. Ebbw flat, at 19½ to 19½. Glasgow Caradon were largely dealt in, opening at 27s, 6d., but declined to 22s, from which a rally took place to 24s, closing lower, at 23s to 23s, 6d. The last sale of ore by this company was 240 tons, realising 1363½ 4s. 6d., or an average of 113s. 7d. per ton. The sale at this time last year was 250 tons, realising 843½ 15s., or an average of 67s. 6d. per ton. This year, therefore, compares very favourably with last, and the price of the share was then 37s. to 38s. Gunnislake (Clitters) firm, at 1½ to 1½. The last sale of ore by this company was 206 tons, realising 1453½ 18s., or an average of 144s. 3d. per ton, which is very favourable. Huntington flat, done at 54s., 53s., 54s., and 53s. 6d., closing 53s. to 54s. Mid-Lothian Mineral Oil weak, at 1½ to 1½. Marbella done at 5, closing 100s. to 101s. Merry and Cunningham done at 60s., but declined to 59s. 6d., afterwards improving to 60s. 6d., about which price they close. Monkland ordinary good done at 75s., 76s., and 77s., closing 76s. to 77s. Niddrie, 68s. 6d. to 69s. 6d. Omoa and Cleland done at 40s. 6d., Tharsis done at 23½, 23½, 23½, and 23 11-16ths, closing about 23½; new shares, 16 to 16½. West Calder Oil very flat, at 5½ to 5½. Scottish Wagon firm, at 12½ to 12 5-16ths. The directors of this company recommend a dividend at the rate of 8 per cent. per annum, being the same as at this time last year. The meeting is to be held on the 29th inst. It is worthy of note by investors that none of the English wagon companies pay less than 10 per cent., while some pay as much as 20. There does not appear any reason why this company should not, therefore, in due time increase its rate of dividend with proper management. The shares should, therefore, be an excellent progressive investment, yielding 8½ per cent. at present prices. Yorke Peninsula ordinary again done at 5s. 2d., closing 4s. to 5s.

On Tuesday (being contango day) the business was smaller. Benhar lower, at 14½ to 14½; Bolekow, Vaughan, A. done at 55, closing 54½ to 55; Canadian Copper Pyrites done at 31s. 6d. and 31s., closing 31s. to 32s.; Ebbw, 19½ to 20; Dunsley Wheel Phenix, 4s. to 5s.; Emma done at 1½, closing 35s. to 36s.; Glasgow Caradon done at 22s. 6d., but advanced to 24s., closing 24s. to 25s.; Huntington firm, done at 53s. 6d., closing 53s. 6d. to 54s. 6d.; Javall, 4s. 9d. to 5s. 3d.; Mid-Lothian Mineral Oil, 1½ to 1½; Marbella firm, done at 5½, closing 5½ to 5½; Merry and Cunningham done at 60s., 59s. 6d., and 60s., closing about 59; Monkland ordinary done at 76s. 6d., closing 76s. to 77s.; Niddrie done at 69s., closing 68s. 6d. to 69s.; Omoa and Cleland done at 40s. 6d.; Tharsis done at 23½, from 23 11-16ths to 23½, closing about 23½; new shares, 16 to 16½; Scottish Wagon done at 12½; and new shares changed hands at 22s.; West Calder Oil again flat, at 5½ to 5½; Yorke Peninsula ordinary firm, at 4s. to 5s.; and 15 per cent. guaranteed preference shares offered at par. The following were the rates of continuation current to-day:—Contangoes: 1½d., 1d. on Canadian Copper Pyrites; 1½d. on Glasgow Caradon; 4d. on Port Washington; 2d. on Huntington; 3d., 4d. on Marbella; 3½d. on Monkland ordinary; 3d. on Niddrie; 2d. on Omoa; 1s. on Tharsis; 1s. on Tharsis new; 9d. on R.O. Tinto; 1s. 6d. on London and Glasgow Engineering. Even: Emma, Back Australian, 1½ to 1½; Merry and Cunningham weak, done at 59s., then improved to 60s., but again declined, and close about 59s. There seems to be an impression that these shares will go down, although no particular reason is assigned. If they do go down any further they will be worth picking up. Monkland ordinary, 75s. to 76s. Mid-Lothian Mineral Oil, 1½ to 1½. Niddrie, 68s. to 69s.; it is said that the dividend on these shares will probably be 15 per cent., if this should be the case the shares appear too high at present when compared with others paying good dividends, and selling at discounts. Omoa and Cleland changed hands at 40s., closing 100s. to 101s. Tharsis opened at 23½, but declined to 23½, closing 23½ to 23½. New shares done at 16½, closing 16 to 16½. West Calder Oil again lower, at 2 to 2½. Yorke Peninsula ordinary firm at 4s. to 5s.; the account for settlement Feb. 12, opened to-day; Tuesday, Feb. 9, will be contango day. Subjoined will be found the latest prices:—

COAL, IRON, STEEL.			
Amount share.	Amount paid up.	Name.	Latest price.
10	10	Arnstion Coal (Limited)	14½
10	10	Benhar Coal (Limited)	14½
100	35	Bolekow, Vaughan, and Co. (Limited)	55
10	7	Cairnstable Gas Coal (Limited)	6½
10	10	Chillington Iron (Limited)	6
32	29	Ebbw Vale Steel, Iron, and Coal (Limited)	19½
10	3	Fife Coal (Limited)	5
10	8	Glasgow Port Washington Iron and Coal (Limited)	89s.
10	10	Ditto All paid	5½
10	10	Lochore and Caplethorn (Limited)	7 15-16
10	10	Marbella Iron Ore (Limited)	5½
10	3½	Merry and Cunningham (Limited)	59s.
10	10	Ditto All paid	9½
10	10	Monkland Iron and Coal (Limited)	76s.
10	10	Ditto 7 per cent. Guaranteed Preference	158s.
100	100	Nant y Glo and Blaina Ironworks pref. (Limited) ..	40
10	2	Niddrie Coal (Limited)	40s.
10	4	Omoa and Cleland Iron and Coal (Limited)	40s.
1	1	Scottish Australian Mining (Limited)	1½
1	5s.	Ditto New	6s. 3d.
50	50	Shotts Iron	77
10	4	Ditto New, issued at 2½ premium	6
COPPER, LEAD, SULPHUR, TIN.			
10	7	Canadian Copper Pyrites (Limited)	31s. 6d.
10	10	Ditto All paid	6½
10	7	Cape Copper (Limited)	30½
1	1	Cwm Bychan Silver Lead (Limited)	½
1	1	Cwm Lery Lead (Limited)	½
2	2	Dunsley Wheel Phenix Tin (Limited)	½
1	1	Glasgow Caradon Copper Mining (Limited)	1½
1	15s.	Ditto New	20s. 6d.
10	5½	Gunnislake (Clitters)	1½
10	9	Huntington Copper and Sulphur (Limited)	2½
1	1	Islay Lead (Limited)	½
25s.	25s.	Kapunda Mining (Limited)	1
10	4	Laurelton Copper Mining (Limited)	1
10	10	Rio Tinto (Limited)	10
10	10	Russian Copper Mining (Limited)	2½
10	6½	South Rosker	5
10	10	Tharsis Copper and Sulphur (Limited)	23½
10	7	Ditto New	16½
10	89s.	West Maria and Fortescue	3s.
1	1	Yorke Peninsula Mining (Limited)	½
1	6s.	Ditto 15 per cent. Guaranteed Preference ..	½
GOLD, SILVER.			
5	5	Colorado Terrible Mining (Limited)	3½
20	20	Emma Silver Mining (Limited)	2
10	10	Flagstaff Silver Mining (Limited)	2½
2	2	Javall Gold Mine (Limited)	¼
5	5	Last Chance Silver Mining (Limited)	1
OIL.			
10	7	Dalmeny Oil (Limited)	5½
5	5	Mid-Lothian Mineral Oil (Limited)	1½
10	8	Uphall Mineral Oil (Limited)	5
10	10	West Calder Oil (Limited)	5½
10	8½	Young's Paraffin Light and Mineral Oil (Limited) ..	5½
MISCELLANEOUS.			
10	10	Conglog Slate and Slab (Limited)	10½
10	9	Highland Fuel Feat (Limited)	7
50	25	London & Glasgow Engineering & Iron Shipbuilding ..	2½
10	1	North Cornwall Kaolin (Limited)	1
20	9½	Peruvian Nitrate (Limited)	1
10	10	Scottish Wagon Company (Limited)	12½
10	1	Ditto New	22s.

NOTE.—The above list of mines and auxiliary associations is as full as can be ascertained, Scotch companies only being inserted, or those in which Scotch investors are interested. In the event of any being omitted, and parties desiring a quotation for them and such information as can be ascertained from time to time to be inserted in this list, they will be good enough to communicate the name of the company with any other particulars as full as possible.

J. GRANT MACLEAN, Stock and Share Broker, Post Office Buildings, Stirling, Jan. 28.

REPORT FROM DERBYSHIRE AND YORKSHIRE.

Jan. 28.—The lead mines of Derbyshire have been working with great regularity since the commencement of the year, but we hear of neither changes nor the opening out of new fields, with, perhaps, one exception. The county is evidently not a very favourable one in the eyes of speculators and investors in that description of property. Still there are a few persons who have done remarkably well in it, but a great many have also failed to make profits worth consideration. Colliery property has had more charms, so that the last two or three years have seen great changes, and the passing of several coal mines from private hands to limited liability companies. So far most of them appear to have done well, but the time is evidently approaching that will try several of them most severely.

Coal is now abundant, and falling in price, so that should the men in South Wales go to work there is no doubt but that coal will be a drug, and more so when the new collieries, now being sunk in all directions, are raising coal. At present the coal trade is tolerably good, but there are unmistakable indications of a decline that will seriously tell on both profits and wages. To London the business doing from the leading pits, including Clay Cross, Langley, Tibshelf, and Eckington has been well maintained, but there is certainly not that activity that was so apparent two or three weeks since. The

iron trade keeps up very well, both as regards the plain and manufactured material, and the leading establishments appear to be favourably off for orders, whilst we hear of no disputes with the workmen, such as are now taking place in other districts.

Affairs in Sheffield are anything but promising, and a good many workmen are on short time. In but few branches, indeed, is there anything approaching activity, whilst the prospects are not very bright. The mills are working well on heavy and light plates, but the demand for rails is quiet. Cutlery is in very moderate request, and very little business is being done on American account. The Coal Trade in South Yorkshire is getting quiet, and prices are falling. On Tuesday there was a meeting of the South Yorkshire Steam Coalowners' Association, at the King's Head Hotel, Barnsley, to consider the present condition of the trade. It was then agreed that the price of steam coal should be reduced 1s. per ton from Feb. 1, so that the rate will then be 12s. 6d. per ton. House coal is also easier to buy, and will be more so as the season advances. The reduction in the price of house coal has, naturally enough, brought up another question—that of wages. The subject is now being discussed, and before very long it will be brought forward by the colliery owners. Of course, there will be an opposition to any proposal relating to wages, but as they were advanced with the rise in the price of coal it is only fair that they should fall with the decline of it. But this is an argument that will fall upon unwilling ears, although the men will in the long run be obliged to acknowledge the full force of it.

A meeting of the South Yorkshire Steam Coal Owners' Association was held at Barnsley on Tuesday, when, after duly considering the present state of trade as regards the demand and the competition in the various markets, it was agreed that a reduction in the price at the collieries to the extent of 1s. per ton should be made. The new rate will come into operation on Monday, when the price will then be 12s. 6d. per ton, instead of 13s. 6d., as at present.

REPORT FROM NORTH AND SOUTH STAFFORDSHIRE.

Jan. 28.—The steady tone of the Iron Trade, observable at the Quarterly Meetings, has been fairly well sustained alike in the pig and finished departments, although, perhaps, for the commoner qualities of bars and other finished iron prices are scarcely so strong as reported a week ago. The rates for pig-iron remain steady at 3½, 5s. for common cinder, and 5½, 5s. for all-mine (hot-air), mixed iron of fair medium quality realising 4½, 5s. per ton. There is a firmness in the rate for cold-blast iron at 6½, 10s. per ton for the Lillishall brand. Makers of second qualities of pig experience a good deal of competition on the part of rival producers in the North Country districts, but local prices are not likely to give way, because any reduction on the present standard would under existing circumstances of manufacture result in absolute loss rather than profit on every ton of iron produced. The market for finished iron is well maintained, especially in regard to sheets and better qualities of iron of other descriptions. Common (unmarked) bars have changed hands this week at 8½, 17s. 6d. per ton, being 2s. 6d. under the minimum figure quoted a week ago. There is firmness in the rates for marked iron, bars (ordinary) being 10½, 10s.; ditto BBH, 11½; and ditto "Round Oak" brand, 11½, 12s. 6d. Sheets (singles) range from 14½ to 15½, per ton. On the Dudley side of the district the current demand runs principally for flats, squares, rivet, cable, and horse-shoe iron.

The South Staffordshire Coal Trade is a degree quieter this week. Prices of best coal remain steady at 18s.; lumps ditto, 12s.; seconds, 13s.; and engine slack, 6s. per ton at wharf. The demand for inferior coal is very restricted, and selling rates show a good deal of irregularity. There is no foundation for the rumour which has found its way into some of our contemporaries that the Dudley coalmasters contemplate a further advance in prices. Any change that may take place will probably be in the opposite direction. Ironstone is in steady demand, and last week's quotations well supported.

The deputation who met the Chairmen of the railway and canal companies serving the district at Euston last Thursday were patiently heard, but the result is somewhat the same as has attended the efforts of similar deputations—a promise was given that the matter would be looked into, and if it was ascertained that in any cases they could give relief, the subject would receive their consideration. The bad success which has attended the previous agitation makes people rather sceptical as to this movement doing any good; but with a Railway Commission to appeal to, if necessary, some arrangement might be made. It was shown last week to the railway and canal authorities, who were represented by the Chairman of the London and North-Western Railway Company, the Chairman of the Great Western, the Chairman of the Midland and of the Grand Junction Canal Company, that there were great grounds of complaint respecting the high and unequal rates which are charged upon South Staffordshire iron, especially to London and Liverpool, and this affords other districts which are not so favourably situated for cultivating the trade an opportunity for competing successfully with this locality. In the existing condition of trade, this is the more severely felt, and something must be done to equalise the charges. Then, again, the mineral rates from North Staffordshire are much larger than they ought to be. It was urged by the deputation that if the rates were lowered an increase in the traffic receipts would ensue, as a greater quantity of goods would have to be conveyed. A reduction in rates would be a boon to the district, seeing that it would assist manufacturers in supplying cheaper iron.

On Thursday a special general meeting of the shareholders of John Bagnall and Sons (Limited) was held at the Queen's Hotel, Birmingham, to consider a circular issued by Messrs. Barclay, Gem, and Lloyd, three of the directors, and an accompanying agreement. The circular set forth that an agreement was made between the late James Bagnall and Mr. James Carlton, of Manchester, previously to the formation of the company, whereby Mr. Carlton was to receive 85,000£, as "commission," for guaranteeing the successful floating of the company. The directors who signed the circular stated that they had no knowledge of this when the company was formed, and, under the circumstances, they now tendered their resignation as directors. Mr. Duignan, solicitor to the company, in an able and lucid speech, pointed out that the agreement in question had nothing to do with the shareholders, who had received for their money all that was promised in the prospectus, and that property, for which they gave 300,000£, was afterwards valued at 345,000£. After much discussion, in which the action of Messrs. Barclay, Gem, and Lloyd was approved, they consented to remain directors at the request of the meeting, and a committee was appointed to enquire whether the position of the company was affected by the disclosure, and to consider what course should be pursued.

The Wolverhampton Rolling Stock Company (Limited) had declared a dividend at the rate of 10 per cent. per annum on the operations of the past half-year.

To-day's quotations on the Birmingham Stock Exchange include the following:—Sandwell Park Colliery (10 paid), 34 buyers; Palsall Coal and Iron, 3 dis. sellers; Staffordshire Wheel and Axle, 23 prem.; Patent Shaft and Axle, 5½ prem.; Patent Nut and Bolt, 5½ prem.; Ivy House and Northwood Colliery, 1 prem.; Cannock and Huntington Colliery, ½ dis.; Gloucester Wagon, 1½; Birmingham Wagon, 19½; and Oldbury Carriage (5 paid), 8½.

Some improvement has been noticeable in the North Staffordshire Iron Trade since the quarterly meetings. Orders are being given out more freely, and the drooping tendency of prices has quite disappeared. Bars (ordinary) are steady, at 9½, 5s. per ton. Pig-iron and ironstone are in good supply, and prices are steady at last week's rates. Coal is in quieter demand, especially for pottery requirements, but there is no alteration in prices.

The annual meeting of the South Staffordshire Ironmasters' Association was held to-day (Thursday) in Birmingham, when Mr. J. P. Hunt (New British Iron Company) was elected chairman for the ensuing year, and Mr. Daniel Jones was re-elected to the combined offices of treasurer and secretary.

A new colliery company is about to be launched in South Staffordshire, under the name of the Spon Lane Colliery Company (Limited), to work certain seams of coal at Bullock's Farm, Westbrom-

wich. The estate comprises some fine ungoten seams. The capital is fixed at 100,000£, in 100 shares.

SANDWELL PARK COLLIERY.—We are informed that the slight fault which has recently interfered with the drivings at Sandwell Colliery has been crossed, and good, regular thick coal—8 yards thick—has been struck on the other side. We understand that an official circular to this effect will be sent to the shareholders immediately.—*Birmingham Daily Post.*

TRADE OF THE TYNE AND WEAR.

Jan. 28.—The general trade of the district continues on the whole flat. Steam coal has improved a little by the stoppage of that business in South Wales, but the works in Northumberland are not yet fully employed. The strike at Seghill has ended; all the men in all the seams commenced work on Monday on the old terms. Notice was given to all the men in the county on Friday that their present hiring will terminate on Feb. 5, the object being to make a reduction in the rates of from 16 to 20 per cent. on the present gross earnings. It is not at all likely that the men will accept the reduction, although it is, no doubt, necessary, owing to the great reduction in the value of coals; and, should the masters not agree to refer the matter to arbitration, which will be proposed by the men, a strike is quite likely to occur. There has been a great demand for gas coal of late, and it has sold freely at from 10s. to 12s. per ton. The house coal trade is also tolerably brisk, the top price now realised at the pit being about 16s. per ton. The Redheugh Coal Company, near Gateshead, are now working the Beaumont seam, lately won there, which is a good house coal. The same seam has also been won at the new shaft at Dunston, and the Brockwell seam has also been won at this latter shaft, the section being 3 ft. 6 in., and a firm, clean coal. The demand for coke has improved, and prices are consequently firmer. The Cleveland ironmasters are taking increased quantities, and the quantities sent to Cumberland have also been larger lately, so that the prospect for the coke trade is certainly brighter, but the great want in Durham at present is a better demand for manufacturing coal. A great number of the collieries in Durham work this coal, and the demand is not sufficient to keep their works going, while the price received for it will certainly not enable the coalmasters who work second and third rate coals to earn any profits.

The Iron Trade continues to show a firmer aspect, the demand being better for both pig and manufactured iron. The average prices at present are as follows:—No. 1 pig 63s. 6d. to 64s.; No. 3 58s. to 58s. 6d.; and No. 4 forge 55s. to 56s. net cash. Some makers were asking more, and some of the merchants were asking slightly less than the above quotations. Sales were, however, on the average about these rates. The wages question causes much anxiety, as the refusal of the iron ore miners, or any other class of men employed in iron making, to accept the great reduction now offered would throw both coal and iron trades into confusion. The finished iron trade is somewhat better, and there are numerous enquiries for rails; their is no alteration of any consequence in late rates. Rails are from 7½ to 7½, 5s., and plates 9½ to 9½, 5s. The iron and coal masters of the district are moving in the matter of railway charges for minerals by the North-Eastern Company. It is alleged truly that the charges made by the company are excessive, and also that the rolling stock is insufficient in quantity. It is also charged against the company by many colliery owners that much of the rolling stock is in a dilapidated state, and unfit for the conveyance of coals, and a serious loss often occurs from this cause. A meeting is shortly to be held, when those subjects will be fully discussed, and it is intended if no redress can be had from the North-Eastern Company to bring some other railway into the district if possible. As at present this enormous firm has a complete monopoly of the whole district, and merchants and manufacturers and all other persons who send or receive goods are entirely in their hands.

REPORT FROM MONMOUTH AND SOUTH WALES.

Jan. 28.—The long-expected crisis in the staple trades has come at last, and what has been long anticipated has at length resolved itself into a stern reality. The following resolution was passed at a meeting of the Council of the Associated Masters, held at Cardiff on Friday last:—

"Resolved unanimously, after a full discussion upon the condition of the coal trade and the present action of the workmen, and after a mature deliberation upon the serious consequences to them and to the trade of the district which must arise in the event of a general lock-out of the colliers in the Association being ordered, that this Council is compelled to advise the Association to adopt that measure. The Council have come to this determination with the deepest regret, but the organisation on the part of the workmen, which enables them to maintain a strike at a large proportion of the collieries in the Association, supported by the contributions from the men at work, admits of no alternative. Under these circumstances the Council hereby convenes a meeting of the whole Association, in compliance with the 50th section of the deed, to be held at the Royal Hotel, Cardiff, on Jan. 29 inst., at 1 o'clock, to consider the necessity of directing a lock-out of all the colliers in the Association, to take effect on Monday, Feb. 1."

Subsequently a general meeting of the association was held, when the foregoing resolution was submitted. The masters having, however, pre-arranged the matter, immediately confirmed the decision of the council, and unanimously passed the subjoined resolution:—

"Resolved at this meeting of the Monmouthshire and South Wales Collieries Association, after having considered a resolution of the council this day past, advising a general lock-out of all the colliers in the association, and convening a special meeting of the association on Jan. 29 instant to consider and direct a lock-out, that this meeting unanimously approves of such a resolution. Great anxiety is being felt by the general public, especially by those persons who indirectly depend for their livelihood upon the coal and staple trades of the district. Tradespeople, too, are beginning already to complain of the little business there is doing, and the "takings" have fallen in some departments to a very low ebb. The colliers appeared generally to evince indifference as to what course the masters would adopt, and repeated their expressions of determination to resist to the last degree the terms of the reduction. As will be seen above, the resolution speaks simply of the lock-out as relating to the collieries; but as a matter of course, if the collieries are stopped there must be a cessation of business at the ironworks. Thus thousands of men who are willing to work will be thrown out of employment through no fault whatever of their own. It is hoped by the public, and doubtless by the masters as well, that those men who have influence with the workmen will use it for good with the more determined strikers, and thus bring the dispute to a speedy termination.

Under present circumstances, very little can be said as to the state of the staple trades. Advice from the iron markets are, however, of a more encouraging nature. The fact that makers did not make any alteration at the quarterly meetings of the trade has induced buyers to come forward more freely with such orders as remain to be given out; and knowing, as they do, that there is little probability of any further reduction being made in prices this quarter. As to the qualities of iron manufactured in South Wales, it may be said that there is no material change in the demand. But even if orders were offered, makers are not in a position to undertake them at present. Some few of the collieries have been at work, and have sent out the largest supplies they can command. These supplies, with such a limited output, are, of course, readily disposed of in the market, and the prices obtained are very profitable to the sellers. It seems in vain now to indulge in the hope that the masters will relent in their determination to carry out the general lock-out, as preparations are already being made at some of the large works with that object. Consequently, it rests with the men to decide whether they will accept the inevitable alternative of enforced idleness and the sufferings and privations which it will entail, or go to work on the masters' terms.

In celebration of the winning of the four-foot seam in the new pits of Messrs. Nixon, Taylor, and Cory, of Merthyr Vale, the employees of the company were, a few days ago, entertained at a dinner, and other rejoicings took place. It is gratifying to turn from the present aspect of affairs to this pleasant circumstance, evincing, as it does, the existence of such good feeling between masters and men.

The production of the precious metals in the United States in 1874 is reported at \$74,401,055, compared with \$72,258,693 for 1873. A

further increase is expected by Wells, Fargo, and Co.'s Express, which organisation furnishes the statistics, when the total for 1875 is made up. This year's total, it is thought, will approximate to \$80,000,000.

GENERAL MINING COMPANY FOR IRELAND (LIMITED). IN LIQUIDATION. MINING AND MANUFACTURING PROPERTY AND PLANT AND MACHINERY FOR SALE.

THE LIQUIDATORS are prepared to **RECEIVE TENDERS** for the PURCHASE, in One Lot, of the COMPANY'S EXTENSIVE and VALUABLE LEASEHOLD INTERESTS at Silvermines, in the County Tipperary, and the complete MINING and MANUFACTURING PLANT and MACHINERY on the property.

The Silvermines mineral property is within five miles of Nenagh, and the line of railway from that town to Birdhill runs close by the mines.

The deposits consist of Calamine, Carbonate of Zinc (supposed to be the only one of the kind in the United Kingdom), Silver-lead, Blende, Copper, Sulphur Ore, and Fire-clay.

The manufacturing portion of the property consists of the Furnaces and appliances for making Oxide of Zinc, which have been in active operation up to a recent period.

Detailed particulars of the property, plant, and machinery can be had on application, and Tenders for the whole, in One Lot, will be received at the office of the Liquidators, 29, Westmoreland-street, Dublin, up to Wednesday, the 10th day of February, 1875, inclusive, but the Liquidators do not bind themselves to accept the highest or any offer.—Dublin, 7th January, 1875.

IN THE MATTER OF THE VOLUNTARY LIQUIDATION OF THE PERKINS BEACH MINE (LIMITED).

THE LIQUIDATOR appointed in the above Matter is prepared to **RECEIVE TENDERS** for the PURCHASE of the PLANT, MACHINERY, and other EFFECTS, now lying in and about the above Mine.

The Perkins Beach Mine, which is now in full working order, is situated in the parish of Worthen, in Shropshire. It adjoins the Tankerville Mine, and lies between it and the celebrated Snailbeach Mine.

Several valuable lodes have been proved to exist in the sett, and a large sum of money has been expended in developing them. It is the opinion of gentlemen well acquainted with the district that the Mine only requires to be developed to a greater depth to prove it one of the best in the Shropshire Lead District.

The PLANT includes THREE STEAM ENGINES, a large quantity of RAILS, STORES, TIMBER, DRESSING FLOORS, OFFICE, and other FITTINGS and EFFECTS.

The Mine is held under Leases for 21 years, from the 29th September, 1869, at a royalty of 1-12th, and the purchaser will be entitled to all such interest in the said leases as is vested in the Liquidator, and which he is empowered to dispose of.

Full particulars may be obtained from Mr. E. FIRMSTONE HEATH, Exchange Chambers, Wolverhampton, to whom sealed tenders may be sent on or before the 5th day of February next, and from whom orders to inspect the Mine may be obtained.

The Liquidator is not bound to accept the highest or any Tender.

TO BE SOLD, BY PRIVATE CONTRACT, the LEAD MINES, called—
SUCCESS, RUSHY CLIFF, AND NANCY,
situate at TISSINGTON, near ASHBOROUGH, DERBYSHIRE.

Specifications, and cards to view the Mines, may be obtained of the Secretary, 61, Osmaston-street, Derby, on and after Monday, January 25th.

Tenders to be sent in on or before February 11th, 1875. W. H. FALE, Solicitor.

TO MANUFACTURERS, PATENTEES, AND CAPITALISTS.

EXTENSIVE ROOMS AND PREMISES, with RESIDENCE, near a large COLLIERY, IRON WORKS, and RAILWAY, suitable for MANUFACTORY or BREWERY. Steam power and warming apparatus fixed. **TO BE LET, OR SOLD.**

Apply to Messrs. OLIVER, NEWBOLD, and OLIVER, Auctioneers, Derby.

FINE OPPORTUNITY FOR MAKING A FORTUNE.

TO BE SOLD, PART OR ENTIRE (former preferred) of a COLLIERY ROYALTY, of about 170 acres, in NORTH WALES. The pit is sunk 40 yards deep to the seam containing the best description of Cannel. There are six other seams of good coal (the first being King Coal, only 14 yards under it) known to be beneath this seam. Its situation being half a mile from a railway station, and also admirably adapted for land sale, close to excellent roads, the working expenses, royalty, rent, and outlay small for a probable gain in a few weeks of 40 tons daily at an almost fabulous profit, render the present undertaking one well worthy the immediate attention of capitalists, coal dealers, gas manufacturers, or colliery proprietors.

Address, "Q. E. D.," care of Mr. Watson, 15, Fenwick-street, Liverpool.

SMALL GOING COLLIERY

TO BE DISPOSED OF, IN FIFE, N.B.— The coal is very rich, and is said to resemble closely the Newcastle coking coal. Very little capital required to pay for start, and to work the concern. Offers of cash for start and machinery, and of lordships, &c., &c., received up to the 10th February.

Particulars on application to Messrs. TRAQUAIR and DICKSON, 17, Young-street, Edinburgh.

TO CAPITALISTS.

FOR SALE, IN NEW SOUTH WALES,—
1340 ACRES TIN LANDS.—Lode and Stream.
2430 ACRES COPPER LANDS (portions freehold).
2112 ACRES IRON AND COAL.
2250 ACRES COAL (on sea coast).
4000 ACRES COAL (inland, on railway line).
200 ACRES KEROSENE SHALE.
200 ACRES PLUMBAGO.
105 ACRES FREEHOLD GOLD DEPOSIT (Brown's Creek).

The above properties are all first-class, and on or near railway lines or water carriage, and are the very "pick" of their respective districts (being some of the first selections made).

Liberal terms, either as to purchase or working on royalty, will be given to parties able to carry out arrangements.

Apply to the owner, CHARLES W. WEEKES, Circular Quay, Sydney, N.S.W.

TO MINE PROMOTERS, AND OTHERS.

FOR SALE, in One Lot, a most promising young LEAD MINE, in WALES, with its PLANT and MACHINERY. It is 25 fms. deep under adit, and has returned lead ores of the value of £1700 from limited operations. At the bottom level, at 4 fms. from the engine-shaft, is an intersection of a north and south east and west lodes, where good ore was raised, and in driving east towards a run of good ore, when the small capital of a limited company became exhausted. At this time the mine was making returns of lead ore, and in the bottom of this deepest level the lode was and is worth 2½ tons of lead ore per fathom, offering every prospect of success at a deeper level.

For further particulars, address, "Liquidator," MINING JOURNAL Office, 26, Fleet-street, London.

CORNISH ENGINES.

FOR SALE:—
ONE excellent 70 in. CORNISH PUMPING ENGINE, 10 ft. stroke, with metallic piston, with or without three boilers, 15 tons each, with fittings.
ONE good 72 in. CORNISH BEAM ENGINE, 10 ft. stroke, with inverted cylinder.

ONE superior 50 in. CORNISH PUMPING ENGINE, 10 ft. stroke, with drum.
ONE first-class 28 in. WINDING ENGINE, 6 ft. stroke, suitable for colliery, with drum.

ONE very good 20 in. horizontal WINDING ENGINE, 10 ft. stroke.
PUMPWORK of all sizes; CORNISH CRUSHERS; BOILERS from 6 to 12 tons; and a LARGE STOCK of MATERIALS in general use in mines.

Apply to F. W. MICHELL and Co., Mine Material Depot, East Carn Brea, Redruth, Cornwall.

PIT SINKING AND WINDING COAL.

FOR SALE, and ready for immediate delivery, a 14, 18, 25, and 35 horse power PORTABLE STEAM ENGINES, with link motion reversing gear, winding drum, gear, &c., complete.

Also, a 9 and 18 horse power VERTICAL ENGINES, with link motion reversing gear, suitable for mining operations.

FOR SALE,—An excellent PORTABLE STEAM ENGINE; and a 7-ft. PAN MORTAR MILL. Apply to—
BARROWS AND STEWART, ENGINEERS, BANBURY.

TANK LOCOMOTIVES, double 9 in., cheap, strong, and well finished; portable ENGINES, from 4 to 30 horse power—always ready, or in a forward state, with or without winding or pumping gear; vertical ENGINES and BOILERS, of improved design.

Apply to—**LEWIN, POOLE WORKS, DORSET.**

FOR SALE, a HORIZONTAL HIGH-PRESSURE ENGINE, 13½ in. cylinder, 24 in. stroke; HORIZONTAL HIGH-PRESSURE ENGINE, 14 in. cylinder, 30 in. stroke; and a PAIR of GUN-METAL PUMPS, 6 in. diameter, 12 in. stroke; also, a TUBULAR BOILER, up to 60-horse power, of Yorkshire plates throughout.

Apply to W. T. HENDRY and Co., 2, Wilson-street, London E.C.

IMPORTANT.

TO MINE AGENTS AND MINING ENGINEERS.

MESSRS. BERKELEY AND CO have INVENTED a NEW DESCRIPTION of STENCIL PLATE for LETTERING PLANS, which will enable any person to produce in an instant all kinds of Lettering, North Points, Trees, Borders, Scales, &c., upon Drawings, equal to the finest hand-work. These plates not only supersede all others ever introduced, but are supplied at less than one-third the cost. Illustrated Sheets of New Designs forwarded gratis on application to—
H. R. BERKELEY AND CO.,
WELLINGTON HOUSE, BRENTFORD ROAD, CHISWICK, LONDON.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall and Devon.

IN THE MATTER OF THE COMPANIES ACT, 1862, and of the
WEST BRIDE WALLS MINING COMPANY.—By direction of His Honor, the Vice-Warden, Notice is hereby given, that on Thursday, the 11th day of February next, at the Registrar's Office, at Truro, in the county of Cornwall, at Eleven o'clock in the forenoon, this Court will proceed to MAKE a CALL of NINE SHILLINGS PER SHARE on all the contributors of the said company, settled on the List of Contributors as present members thereof.

All persons interested therein are entitled to attend at the time and place aforesaid, to offer objections to such call.

JOHN HENRY HAMLEY, Official Liquidator.
Dated Stannaries Court Office, Truro, January 27th, 1875.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall and Devon.

IN THE MATTER OF THE COMPANIES ACTS, 1862 and 1867,
and of the NATIVE IRON ORE COMPANY (LIMITED).—TENDERS
will be RECEIVED by the Official Liquidator of the said company, at the Stannaries Court Office, in Truro, until Monday, the 8th day of February next, stating the HIGHEST PRICE which will be given for the WHOLE of the UNDERMENTIONED PROPERTY, either as a going concern, or for any portion or portions thereof separately—viz., ALL the INTEREST of the company in the SETT or SETTS under which its mining operations have been carried on at the PAWTON IRON MINE, in the parish of St. Austrey, Cornwall; and at the SMALLACOMBE IRON MINE and the ATLAS TIN MINE, respectively, in the parish of Illogan, in Devon, together with the WHOLE of the

MINING PLANT, MACHINERY, MATERIALS, ORES, AND EFFECTS of and belonging to the said company, and comprising the following:—

AT PAWTON MINE.
IRON ORE, estimated at 550 tons.

ONE 34 in. cylinder PUMPING ENGINE, 8 ft. stroke, equal beam; with TWO BOILERS, 11 tons each.

ONE 16 in. horizontal ENGINE, 2 ft. stroke; with FLY-WHEEL and CAGE and CRUSHER, complete.

Shears and 2 shies; balance bob; wood house over engine; shaft tackle and shieve, with landing brace; 17 fms. of railroad; new wagon; pulleys and bell; crab winch; whim and capstan chain; whim kibble; wood shed over winch; plunger lift, 16 in., 18 tons; 12 fms. 15 in. drawing lift, 7½ tons; 12 fms. 6 in. do., 10 tons; 34 fms. 13 in. pithead rope; 14 fms. 6½ in. rods; rod plates and bolts; 10 fms. 1½ in. round bucket rods; flange bolts; bucket prongs; single winch; large pulley; 5 ft. pulleys; 60 fms. railroad; travelling bob and blocks; 12 in. drawing lift in bottoms; wood tram wagons; 60 fms. ladders; 60 fms. 4½ in. rope, &c.; shaft tackle at Middle Shaft, and landing brace; 10 fms. railroad, tram wagon and pulley stands, shaft tackle and shieve at South Shaft; 6 stands and shieves to ditto, tackle and woodwork at New Shaft; swing platform; 3 ft. 16 in. pumps on dry; 19 ft. 7 in. ditto; 19 ft. 16 in. pump, near engine-house; bridge and other rails; wood rods; rod plates and bolts; old timber; picking table and hatch; 4 jigging machines, with hutchers; carpenter's shop, bench, saw pit frame and pit saw, wood tram wagons, new Norway and other timber, ladder, piece of pine; smith's shop, anvil, vice, crane, and grindstone; jack; boring machine; frames; sundry new and old iron; kiddles and wheelbarrows; smiths' and miners' tools; blocks; screw stock; taps and plates; weighbridge and house; material house; a quantity of powder, fuse, rope, and nails; picks, flat-thread taps, and sundry iron; powder cans; doors; 4 ft. and 2 ft. shieves, near crusher; old air pumps; sundry ladders, iron wheels, &c.; useful and valuable bay horse, 14 hands high; two wheel cart and harness; account house furniture.

At SMALLACOMBE IRON MINE.

Iron ore, estimated at 250 tons; about 200 fms. of railway metal; wheel barrows, and iron tram wagons; several posts; horse whim; a quantity of wire rope; pulleys and stands; about 8 fms. of wood ladders; iron pulley; 2 pieces of timber; 1 weigh bridge; about 1½ cwt. of powder; shovels; sledges; a quantity of steel; 4 powder cans; 23 steel wedges; brick wall and pipe in changing house; 7 mallets; 11 sledges; 17 iron clavers; wheel barrow; hatchet; hand saw; 36 picks; wood chest; a lot of hoop iron; about 5 cwt. of old scrap iron; smiths' bellows, anvil, bench, and vice; 10 pinching bars; sundry pieces of flat iron; screwing machine; 4 pair smiths' hammers, and a lot of tools; wheel; grindstone; wood sheds; and account house furniture, &c.

At the RAILWAY STATION, BOVEY TRACEY, DEVON.

About 600 tons of iron ore, from Smallacombe Mine.

At MARTYN'S WHARF, WADSWORTH, CORNWALL.

About 320 tons of iron ore, from Pawton Mine.

And numerous other effects at the respective mines.

To inspect the above, apply to the Bailiffs in charge at the respective mines; and for further particulars to Mr. JOHN HENRY HAMLEY, the said Official Liquidator.

HODGE, HOCKIN, and MARRACK, Truro
(Solicitors for the said Official Liquidator).

Dated Stannaries Court Office, Truro, January 27th, 1875.

In the Court of the Vice-Warden of the Stannaries. Stannaries of Cornwall.

IN THE MATTER OF THE COMPANIES ACTS, 1862 and 1867,
and of the BOSCASWELL DOWNS TIN AND COPPER MINES ASSOCIATION (LIMITED).—TO BE SOLD, under the direction of the Registrar of the said Court, BY PUBLIC AUCTION, at and upon the Boscaswell Downs Tin and Copper Mines, in the parish of St. Just-in-Penwith, within the said Stannaries, on Friday, the 5th day of February next, at Twelve o'clock at noon precisely, in such Lots as may be then declared, and subject to such conditions as shall be then and there produced, the undermentioned

MINING PLANT, MACHINERY, MATERIALS, AND EFFECTS, viz.:—

ONE 36 in. cylinder PUMPING ENGINE, 8 ft. stroke, with TWO BOILERS, 8 tons each.

ONE 34 in. PUMPING and STAMPING ENGINE, with fly wheel; TWO 8 ton BOILERS, 3 stamps axes, and 36 heads, with frames, &c.

ONE 32 in. STAMPING ENGINE, 9 ft. stroke, equal beam, 2 fly wheels, and 10 ton BOILER, 2 stamps axes, with 32 heads, with frames, &c.

Several hundred fathoms of steel wire rope; a large hemp rope, nearly new; 60 ft. shears, with 3 ft. shies; 2 ton boiler; wood rods; pins; bolts; staples and glands; 8 arm capstan; balance bob; tram wagon; large poppet head; small do.; cast iron bob; shieves, with stands; several sledges; single crab winch; kiddles; shieve; wood material house; beams, scales and weights; barrows; 1 smiths' bellows; screwing stock, with taps and plates; carpenter's bench; augurs; miners' chests; miners' dial; account house furniture; and a variety of other articles and effects in general use in mines.

To inspect the above, apply to the Bailiff in charge at the mine; and for further particulars to Mr. CHARLES W. CLINTON, the Official Liquidator of the said association, at the Stannaries Court Office, in Truro.

ROGERS and SON
(Solicitors to the said Official Liquidator, Helston),
ROBERT M. PAUL, Truro
(Agent of the said Solicitors).

Dated Registrar's Office, Truro, the 27th day of January, 1875.

TO BE SOLD, pursuant to a Decree of the High Court of
Chancery, made in a Cause MARRACK against BAKER, 1872, M. 175, with the approbation of the Master of the Rolls, in Forty Lots, by WILLIAM JAMES JOHNS, the person appointed by the said Judge, at the Cornubia Hotel, Copperhouse, Hayle, in the county of Cornwall, on Tuesday, the 16th day of February, 1875, at Two o'clock in the afternoon precisely, the ENGINE WORKS, BRASS and IRON FOUNDRIES, HAMMER MILLS, and PREMISES, constituting

THE COPPERHOUSE FOUNDRY,
situate at Copperhouse, in the town and port of Hayle, in the county of Cornwall, which has been carried on for upwards of fifty years by the Cornish Copper Company, under the style of Sandys, Vivian, and Company.

Together with the SHIPBUILDING YARD, ROPERY, GAS WORKS carried on in connection with the above business, and about 140 DWELLING HOUSES and COTTAGES, to most of which gardens are annexed; FARMSTEAD and other BUILDINGS—the whole forming a large part of the ESTATES of TREVASACK and VENTONLEAGUE, containing together nearly FORTY ACRES, 47-60ths of which are held for the residue of a term of 999 years, of which about 904 are unexpired, at a peppercorn rent, with the benefit of a covenant to convey the reversion in fee, and the remaining 13-60ths are held in fee.

This property is situate at the head of the harbour of Hayle, and in the midst of the Cornish mining district, and possesses all the requirements and conveniences for carrying on the above businesses, either as a whole or separately, besides being adapted for carrying on any other extensive mercantile business, such as tin, iron, or copper smelting.

There is a dock and also wharves immediately abutting on the property, to the use of which the company have rights for the purpose of landing or exporting goods at nominal dues.

Facilities also exist for railway transit by the West Cornwall Railway, which runs through the property, and into which provisions have been made for carrying a siding from the company's works.

Printed particulars and conditions of sale, with plan annexed, may be had (gratis) in London of the following solicitors—Messrs. GREGORY, ROWCLIFFES, and RAWLE, 1, Bedford-row; Messrs. BENNETT, DAWSON, and BENNETT, New-square, Lincoln's Inn; Mr. R. SMITH, 7, New-square, Lincoln's Inn; Messrs. DAYGILL and FRANKS, 25, Craven-street, Strand; and in the county of Messrs. STEPHENS, PRANCE, and JAGO, Plymouth; Messrs. RODD and CORNISH, Penzance; Messrs. CARLYON and PAUL, and Messrs. HODGE, HOCKIN, and MARRACK, Truro; and at the principal hotels at Truro and neighbouring towns of the Auctioneer; and at the place of sale.

JOHN WM. HAWKINS, Chief Clerk.

Dated this 19th day of January, 1875.

IBSTOCK COLLIERY COMPANY (LIMITED).

IMPORTANT SALE OF SHARES UNDER AND BY VIRTUE OF A
POWER OF SALE.

MESSRS. PORTER AND TAYLOR have received instructions
TO SELL, BY AUCTION, at the Wellington Hotel, Leicester, on Tuesday, February 10th, 1875, at Six for Seven o'clock in the evening, subject to such conditions of sale as will be then and there produced,

1110 £5 SHARES in the IBSTOCK COLLIERY COMPANY (LIMITED),

On which £2 10s. per share is paid up.

The above shares are the property of a gentleman (not himself a colliery owner), who is selling the same in order to realise advances made thereon, and they will be offered in lots of £50 each, on which a deposit of £20 per cent. will have to be paid at the close of the sale, and the balance within seven days from date of sale.

In consequence of the number of lots, the sale will commence punctually at Seven o'clock.

For further information respecting the shares, apply to Mr. J. H. WILLIAMS, Sharebroker, or the Auctioneers, Bowling Green-street, Leicester.

MACHINERY AND MATERIALS, WITH THE SETT, FOR SALE AT SOUTH BEDFORD MINE,

Situate in the parish of TAVISTOCK, in the county of DEVON.

MR. W. NICHOLL has received instructions to **SELL, BY PUBLIC AUCTION,** on Tuesday, February 2nd, 1875, commencing at Twelve o'clock precisely, the whole of the undermentioned valuable

MACHINERY AND MATERIALS, WITH THE SETT.

Which comprises a very valuable piece of mineral ground, being surrounded by the rich mines of the Tavistock District, viz.:—Devon Great Consols, Gunnislake (Clitters), Wheal Russell, and others. It is a very extensive sett, and contains nine well-known lodes, which can be developed to any reasonable depth with the present water power, which is quite sufficient at all seasons for pumping, drawing, crushing, and other work. The MATERIALS consist of—

1 Water-wheel, 40 ft. diam., 5 ft. wide
1 ditto, 40 ft. diam., 4 ft. wide
1 ditto, 22 ft. diam., 6 ft. wide

With iron axes and rings.
29 9 in. pumps
3 matchings
29 in. door pieces
29 in. windbores
2 8 in. working barrels

1 H piece and windbore to match
1 8-in. plunger pole, stuffing box and glands
4 shaft bobs
3 travelling bobs
1 V bob

100 fms. of 2½ in. iron rods
Several tons of strapping plates and caps
2 tons of railway iron
42 fms. of 9 in. rods

2 cranes, scales, stand and weights, hand screw; smiths' tools, consisting of 2 bellows, 2 vices, 2 anvils, tongs, screw stock, mandrill, cranes, &c.; a quantity of miners' tools, grinding stone, wood sheds, ladders, carpenter's bench, a quantity of bricks, 1000 feet of plank, new and old timber, account-house furniture, an excellent dial, &c.

The Auctioneer would beg to say that in consequence of the limited operations of the present company, this mine offers a rare opportunity for mining enterprise, and well worth the attention of capitalists and others to the above-named sett, being a very extensive one; the well-known Ding Dong lode traverse this sett a distance of one mile, and there has been £13,000 worth of mineral raised above the adit level, and nothing done below the same.

Refreshments at Twelve o'clock.

The above will be offered in One Lot, and, if not sold, will be immediately put up in Lots to suit the convenience of purchasers.

Any further particulars may be obtained by applying to Capt. BRAY, the Agent on the Mine; or to Mr. W. NICHOLL, Auctioneer and Valuer, Redruth.

VALUABLE, SCIENTIFIC, and MISCELLANEOUS LIBRARY of a Gentleman, including RARE WORKS on MINERALOGY and GEOLOGY, EARLY TRAVELS, ARCHEOLOGICAL and TOPOGRAPHICAL BOOKS, &c.

MESSRS. HODGSON WILL SELL, BY AUCTION, at their Rooms, 115, Chancery-lane, W.C. (Fleet-street end), on Wednesday, the 3rd of February, 1875, and two following days, at One o'clock,—

VALUABLE SCIENTIFIC and MISCELLANEOUS BOOKS, comprising Rare Works on Geology, Mining, Mineralogy, and Precious Stones; the Laws of the Stannaries, Cases of the Mine Adventures, Numismata, Archaeology, and Topography, Travels in the East, Curious Works on the Rites and Customs of the Turks, Hebrew and Pagan Coronations, Books on Painting and Lives of the Painters, Poetry and the Drama, Church Music and Campanology, Early printed Books, Tracts, &c.

Catalogues forwarded on application.

PRELIMINARY ANNOUNCEMENT.

TO ENGINEERS, MINE AGENTS, AND OTHERS.

MR. SPRY will shortly SUBMIT TO PUBLIC COMPETITION, on WHEAL MARY ANN and TRELAWNY MINES, in the parish of MENHENTOT, near LISKEARD, CORNWALL:—

ONE 80 inch cylinder PUMPING ENGINE, 10 ft. 6 in. stroke, equal beam, with FOUR 10 ton BOILERS, brass well-work and fittings complete, not to be excelled in the county.

ONE 10 inch cylinder PUMPING ENGINE, 10 ft. stroke, equal beam, with FOUR 10 ton BOILERS and fittings complete.

ONE 45 inch cylinder PUMPING ENGINE, 7 feet stroke, with new well-work.

ONE 25 inch cylinder WINDING WHIM ENGINE, 7 ft. stroke, with ONE 8 ton BOILER, nearly new.

ONE 24 inch WINDING WHIM ENGINE, 6 ft. stroke, with TWO 8 ton BOILERS.

ONE 22 inch cylinder WINDING WHIM ENGINE, 5 ft. stroke, with ONE 8 ton BOILER, grinder and stamps (12 heads).

ONE 22 inch cylinder WINDING MAN ENGINE, 5 ft. stroke, with ONE 8 ton BOILER, considered the best man engine in the county.

FIVE WATER-WHEELS, varying from 25 ft. to 6 ft. diameter.

PITWORK (pumps 9 to 16 in.) and MATERIALS, in immense variety and quantity.

Further particulars will be advertised forthwith, and catalogues may soon afterwards be obtained of Mr. W. G. NETTLE, the Purser, Liskeard; or of the Auctioneer, Liskeard.—Dated January 12, 1875.

TO INVESTORS, SPECULATORS, CAPITALISTS, OR COMPANY PROMOTERS.

FOR SALE, upon reasonable terms, a very EXTENSIVE LEAD

MINING SETT, in WALES, situate near to the most celebrated Mines of the Principality, and only half a mile from a railway station. The property extends for about two and a half miles upon a very wide and strong lode, has been sunk, and several levels driven, and a considerable quantity of lead has been raised and sold. There are excellent buildings and machinery already erected, and everything is in readiness for a vigorous and profitable development at a moderate outlay. Want of capital is the sole reason for selling, and the Advertiser is prepared to accept easy terms from responsible parties.

Full particulars can be obtained upon application to "X. Y. Z.," care of G. Blair, New Exchange, E.C.

Principals only will be treated with, and they must give correct name and address.

ON SALE, TWO CORNISH BOILERS, 30 ft. by 7 ft. diameter.

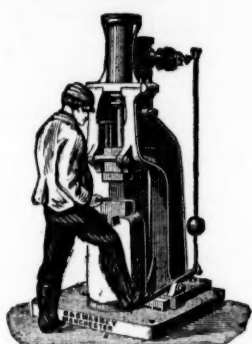
Two flues through each. Safe at 60 lbs. pressure working.

Apply to HENRY PARKINSON, Foundry-street, Bolton.

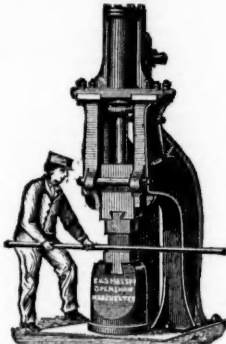
B. & S. MASSEY, OPENSHAW, MANCHESTER.

PRIZE MEDALS AWARDED:—Paris, 1867 Havre, 1868; Highland Society, 1870; Liverpool, 1871; Moscow, 1872; Vienna, 1873.

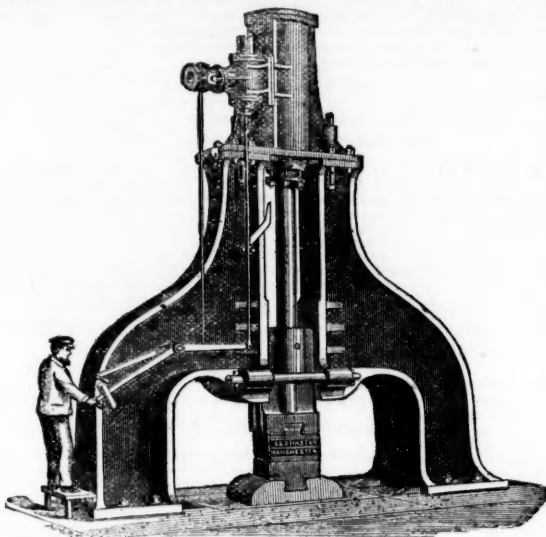
Patentees and Makers of Double and Single-acting STEAM HAMMERS of all sizes, from $\frac{1}{2}$ cwt. to 20 tons, with self-acting or hand motions, in either case giving a perfectly DEAD BLOW, while the former may be worked by hand when desired. Large Hammers, with Improved Framing, in Cast or Wrought Iron. Small Hammers, working up to 500 blows per minute, in some cases being worked by the Foot of the Smith, and not requiring any separate Driver.



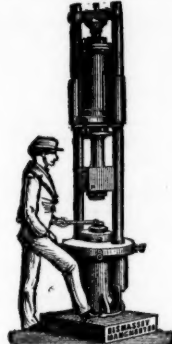
Small Hammer with Foot Motion.



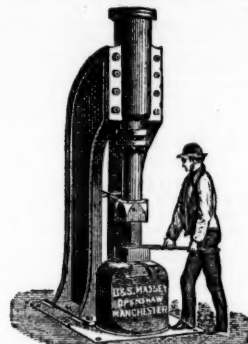
General Smithy Hammer.



Steam Hammer for Heavy Forging.



Special Steam Stamp.

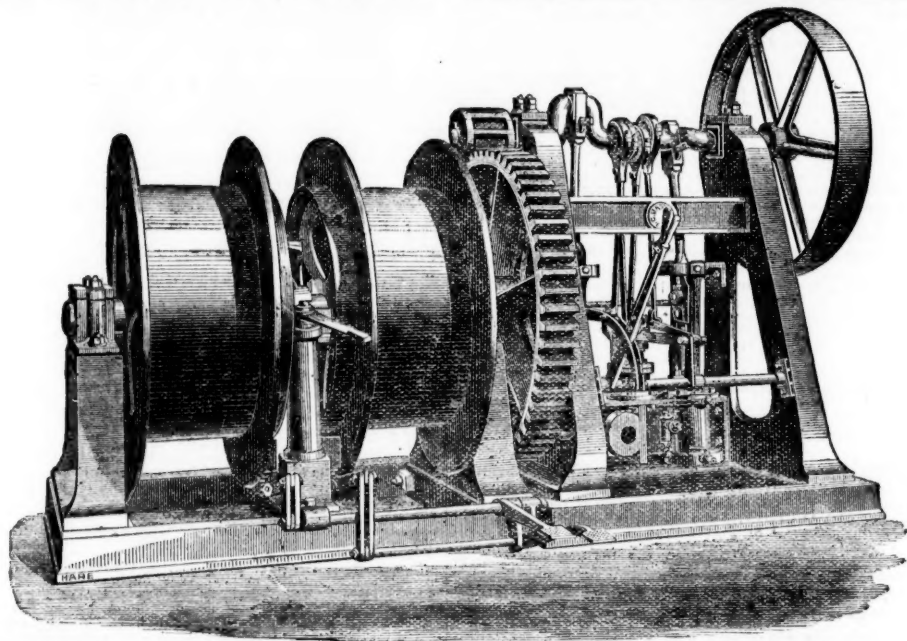


General Smithy Hammer.

From 60 to 100 Steam Hammers and Steam Stamps may usually be seen in construction at the Works.

SPECIAL STEAM STAMPS, of great importance for Forging, Stamping, Punching, Bolt-making, Bending, &c. STEAM HAMMERS for Engineers, Machinists, Ship-builders, Steel Tilters, Millwrights, Copper-smiths, Railway Carriage and Wagon Builders, Colliery Proprietors, Ship Smiths, Bolt Makers, Cutlers, File Makers, Spindle and Flyer Makers, Spade Makers, Locomotive and other Wheel Makers, &c.; also for Use in Repairing Smithies of Mills and Works of all kinds; for straightening Bars, bending Cranks breaking Pig-iron, &c.

I. G. BASS, 18, BOW STREET, SHEFFIELD.



IMPROVED DESIGN of Engine for HAULING, for use with either Steam or Compressed Air.

Takes less room, and can be supplied for less money, than any other Engine of same power.

May also be had with single drum for winding.

BARROWS

AND

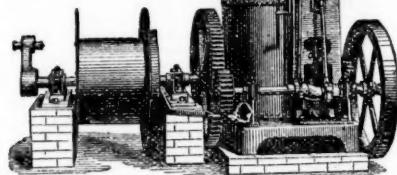
STEWART,

Engineers,

BANBURY,

MANUFACTURE

Semi-
Portable
AND
Vertical



STEAM ENGINES, FOR PIT SINKING
WINDING COAL, PUMPING, &c.

Also COMBINED MILLS and ENGINES for Grinding Slag, Sand, Mortar, &c.

Specifications and prices on application.

MINERS' UNDERGROUND SAFETY HATS,

SAME AS USED IN CORNISH MINES,
WHOLESALE AND FOR EXPORTATION.

H. AND E. MICHELL,

MANUFACTURERS,
PENANCE, CORNWALL.

PRICE LISTS ON APPLICATION.

SOLID DRAWN BRASS BOILER TUBES,

FOR LOCOMOTIVE AND MARINE BOILERS,
EITHER

MUNTZ'S OR GREEN'S PROCESS

MUNTZ'S METAL COMPANY (LIMITED),

FRENCH WALLS,

NEAR BIRMINGHAM.

MINERS PRICKERS AND STEMMERS

OF
MUNTZ'S METAL.

ACCORDING TO THE NEW MINES REGULATION ACT.
BEST KNOWN MATERIAL.

MUNTZ'S METAL COMPANY (LIMITED),

FRENCH WALLS,

NEAR BIRMINGHAM.

DER HAARSCHWUND—(The dying away of the hair, called foxes' evil).—Medical adviser in all diseases of the hair and of the pericranium, about 130 pages of German text, will be sent, post-paid and gratis, on pre-paid application by Mr. EDMUND BUEHLER, Villa Buehligen, in Gohlis, near Leipzig (Germany).

Just published, Free Edition.

GUIDE TO HEALTH; or, ADVICE AND INSTRUCTIONS FOR THE CURE OF NERVOUS DEBILITY.—A New Medical Work on the Treatment of Local Debility, Consumption, Loss of Memory, Physical Depression, Indigestion, and all diseases resulting from loss of nerve power. Illustrated with cases and testimonials. Sent free for two stamps.—Dr. SMITH will, for the benefit of country patients, on receiving a description of their case, send a confidential letter of advice.—Address, Dr. H. SMITH, 8 Burton Crescent, London, W.C.

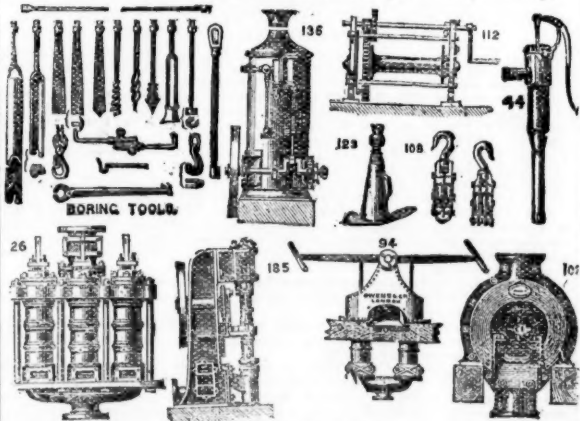
S. OWENS AND CO.,

Hydraulic and General Engineers,

WHITEFRIARS STREET, FLEET STREET, LONDON

AND AT

195, BUCHANAN STREET, GLASGOW (W. HUMR, AGENT).



MANUFACTURERS OF

BORING TOOLS, for testing ground for Minerals. Bridge foundations, Artesian Wells, &c., to any depth.
No. 26.—Treble Barrel and other Deep Well Pumps.
No. 136.—Vertical and other Portable Steam Engines.
No. 185.—Horizontal and Vertical Steam Pumping Engines.
No. 112.—Single and Double-purchase Crab Winches.
No. 108.—Pulley Blocks of all sizes.
No. 123.—Bottle and other Lifting Jacks.
No. 94.—Double-barrel Pumps, for Mine or Quarry use.
No. 44.—Portable Wrought-iron Pumps, ditto ditto.
No. 102.—Bernay's Patent Centrifugal Pumps, of all sizes.

ALSO EVERY OTHER DESCRIPTION OF

HYDRAULIC AND GENERAL MACHINERY,

COMPRISING

TURBINES, WATER WHEELS, WIND ENGINES,
THE HYDRAULIC RAM, FIRE ENGINES, &c.

Catalogues and Estimates on application.



CASARTELLI'S

CELEBRATED TRANSIT CIRCUMFERENTOR,
Or MINERS' DIAL; the best in use.

DICKINSON'S ANEMOMETER;

A simple portable instrument. Requires no timing.

CHAINS, TAPES, SCALES, PROTRACTORS,
DRAWING INSTRUMENTS, STEAM GAUGES, &c., all of first-rate quality.
Catalogues on application.

JOSEPH CASARTELLI,

MANUFACTURER OF

ENGINEERING.

MINING AND SURVEYING INSTRUMENTS,

43, MARKET STREET,

MANCHESTER

ACCIDENTS WILL HAPPEN!!

Provide against the losses that follow by taking a Policy

AGAINST ACCIDENTS OF ALL KINDS,

of the

RAILWAY PASSENGERS' ASSURANCE COMPANY.

THE OLDEST AND LARGEST ACCIDENTAL ASSURANCE COMPANY.

HON. A. KINNAIRD, M.P., Chairman.

PAID-UP CAPITAL AND RESERVE FUND £160,000.

ANNUAL INCOME, £180,000.

COMPENSATION PAID, £915,000.

Bonus allowed to Insurers of Five Years' standing.

Apply to the Clerks at the Railway Stations, the Local Agents, or—

64, CORNHILL, and 10, REGENT STREET, LONDON.

WILLIAM J. VIAN, Secretary.

DYNAMITE

FOR BLASTING PURPOSES, can now be supplied in packages, containing 50 lbs. each, for export to any part of the World.

Nobel's Dynamite, or Safety Giant Blasting Powder,

Is the CHEAPEST and MOST POWERFUL EXPLOSIVE for every kind of MINING and QUARRYING OPERATIONS; for blasting in hard or soft, wet or dry ROCKS; for clearing land of TREE ROOTS and BOULDER STONES; for rending massive BLOCKS of METAL; for SUBAQUEOUS and TORPEDO purposes; and for recovering or clearing away of WRECKS, &c.

ITS SAFETY is evidenced by the total ABSENCE OF ACCIDENTS in transit and storage; it is insensible to heavy shocks, its GIANT POWER being only fully developed when fired with a powerful percussion detonator, and hence its great safety.

As a SUBSTITUTE FOR GUNPOWDER its advantages are the GREAT SAVING OF LABOUR, rapidity and INCREASE OF WORK done, FEWER and smaller BORE-HOLES required, greater depth blasted, safety in use, NO DANGER FROM TAMPING, absence of smoke, unaffected by damp, &c.

For information, apply to the—

BRITISH DYNAMITE COMPANY (LIMITED), GLASGOW;
OR AT THE

London Export Office, 85, GRACECHURCH STREET, LONDON, E.C.

THE DARLINGTON ROCK BORER.

PATENTED IN GREAT BRITAIN, PRUSSIA, FRANCE,
AND VARIOUS CONTINENTAL COUNTRIES.

Makes 300 to 1000 Blows per Minute, as may be required, without Valve or Complicated Gear.

DRIVEN WITH STEAM OR COMPRESSED AIR.

SPECIALLY SUITABLE FOR RAILWAY, QUARRY, AND MINE WORK.

For price and particulars, apply to—

JOHN DARLINGTON,

2, COLEMAN STREET BUILDINGS, MOORGATE STREET, LONDON.

MINING MACHINERY AND TOOLS.

THE TUCKINGMILL FOUNDRY COMPANY,

85, GRACECHURCH STREET, LONDON, E.C. WORKS: TUCKINGMILL.

MANUFACTURERS of every description of MINING MACHINERY, TOOLS, MILLWORK, PUMPING, WINDING, & STAMPING ENGINES.

SOLE MAKERS OF

BORLASE'S PATENT ORE-DRESSING MACHINES AND PULVERISERS.

PRICE LISTS CAN BE HAD ON APPLICATION, AND

SPECIAL QUOTATIONS WILL BE GIVEN UPON INDENTS AND SPECIFICATIONS.

TUCKINGMILL FOUNDRY AND ROSEWORTHY HAMMER MILLS.

TUCKINGMILL, CORNWALL, AND 85, GRACECHURCH STREET, LONDON, E.C.



HANDYSIDE'S SMITHS' HEARTHS AND FORGES

OF ALL SORTS AND SIZES.

For every kind of Smiths' Work, from the large fire with triple blast, for heavy forgings, to the smallest rivet hearth.

PRICES REDUCED TEN PER CENT., MAY 15.

WORKSHOP HEARTHS

(Nine shapes and sizes), with WATER TUYERES, adapted for Fan or Blower Blast.

PORTABLE FORGES

(Four sizes), each complete and self-contained, with a blower which—unlike a fan—is rotated at a slow speed only. These forges are useful either as permanent workshop tools or in colonies, steam-ship engine-rooms, and other places when no steam power or fixed fan is available. Entirely supersedes the use of bellows. Illustrated Price Lists post free on application.

ANDW. HANDYSIDE & CO., Limited,

32, WALBROOK, LONDON.—BRITANNIA IRONWORKS, DERBY.

The Business of A. H. & Co., as Bridge Builders, Ironfounders, Makers of Ornamental Ironwork, Malleable Iron Castings, &c., is fully described in their various Catalogues.
SOLE AGENTS IN SCOTLAND,—BENNETT & KENNEDY, 116, ST. VINCENT STREET, GLASGOW.

Second Edition. Just published, price 8s. 6d.

A NEW GUIDE TO THE IRON TRADE

OR, MILL-MANAGERS' AND STOCK-TAKERS' ASSISTANT;
Comprising a Series of New and Comprehensive Tables, practically arranged to show at one view the Weight of Iron required to produce Boiler plates, Sheet-iron, and Flat, Square, and Round Bars, as well as Hoop or Strip Iron of any dimensions. To which is added a variety of Tables for the convenience of Merchants including a Russian Table.

By JAMES ROSE,
Batman's Hill Ironworks, Bradley, near Bilston.

OPINIONS OF THE PRESS.

"The Tables are plainly laid down, and the information desired can be instantly and accurately obtained."—*Mining Journal*.

"The work is the result of much labour, and is decidedly valuable."—*Engineer*.

"By its use many hours time spent in tedious calculations will be saved and many very serious errors avoided."—*Wolverhampton Chronicle*.

London: MINING JOURNAL Office, 26, Fleet-street; and to be had of all booksellers.

INVESTMENTS IN MINES ARRANGED FOR CAPITALISTS.

Now ready, price 3s., by post 3s. 3d., Fifth Edition; Fifteenth Thousand Copies, much improved, and enlarged to nearly 300 pages.

HOPKINSON'S CONVERSATIONS ON MINES, between Father and Son. The additions to the work are near 80 pages of useful information, principally questions and answers, with a view to assist applicants intending to pass an examination as mine managers, together with tables, rules of measurement, and other information on the moving and propelling power of ventilation, a subject which has caused so much controversy.

The following few testimonials, out of hundreds in Mr. Hopkinson's possession speak to the value of the work:—

"The book cannot fail to be well received by all connected with collieries."—*Mining Journal*.

"Such a work, well understood by miners, would do more to prevent colliery accidents than an army of inspectors."—*Colliery Guardian*.

"Its contents are really valuable to the miners of this country."—*Miners Conference*.

To be had on application at the MINING JOURNAL Office, 26, Fleet-street, London.

FOR 1873.

POST FREE, TWO SHILLINGS, IN STAMPS.

BAILEY'S

Illustrated Inventions,

(Sixteenth edition), 25th thousand, 1000 engravings, 150 pages, weight 10 ounces, illuminated covers. Published at a great cost by

J. BAILEY AND CO.,

INVENTORS, PATENTEES

BRASSFOUNDERS,

AND MANUFACTURERS OF

Engineers' & Contractors' Sundries,

AND USEFUL INVENTIONS

For Cotton Spinners, Railway Companies, Engineers, Colliery Proprietors, and nearly every description of Employers of

Labour, County Gentlemen, &c., &c.;

ALSO OF EVERY DESCRIPTION OF

ENGINE AND BOILER FITTINGS,

PYROMETER INVENTORS AND PATENTEES;

Electric Telegraph Engineers,

AND

TURRET CLOCK MAKER;

Makers of the celebrated

AUTOMATIC CLOCK

For indicating the pressure of steam day and night, rise and fall of the tide, &c.

Winding Indicators, Signal Bells,

&c., &c.

DEPARTMENTS:

I.—BRASS FOUNDRY & STEAM FITTING DEPARTMENT.

II.—ENGINEERS' SUNDRIES DEPARTMENT.

III.—SMALL MACHINE, PUMP, AND FIRE ENGINE, &c., &c., DEPARTMENT.

IV.—CLOCK DEPARTMENT.

V.—ELECTRIC TELEGRAPH DEPARTMENT.

All profusely illustrated, described, and priced.

J. BAILEY AND CO.,

ALBION WORKS,

SALFORD,

MANCHESTER.

The above is sent free to Working Men's Clubs, Mechanics Institutions, or Improvement Societies.

BAILEY'S SPECIALITIES FOR 1873.

BOILER FEEDING

THE GRINDROD

BOILER FEEDER

Which keeps the water at one definite height day and night.

MUCH IN USE IN THIS DISTRICT.

THE

STILWELL WATER HEATER

AND

LIME EXTRACTOR.

THE HALLAM

GIFFARD INJECTOR

These are all high-class inventions, and are with confidence recommended.

CIRCULARS ON APPLICATION

THE MINING SHARE LIST.

BRITISH DIVIDEND MINES.

Shares.	Mines.	Divid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
1500	Aldrey Edge, c, Cheshire	1 0 0	5 1/2	5 1/2	12 1/2	0 0 0	Apr. 1874
2000	Bamford, c, Devon	1 0 0	5 1/2	5 1/2	0 2 0	0 0 0	June 1873
5000	Black Cat, c, Cardigan (24 sh.)	3 10 0	5 1/2	5 1/2	0 10 0	0 0 0	June 1873
200	Betula, c, St. Just	116 5 0	50	47 1/2	619 1/2	0 0 0	Aug. 1872
10000	Brockford, c, Cardigan	1 7 6	2 1/2	2 1/2	2 2 0	0 0 0	Nov. 1872
4000	Brockford, c, Buckfastleigh	1 16 0	4	3 1/2	3 2 0	0 0 0	Nov. 1872
3248	Carpoll, c, Newberry	5 4 5	1	3/4	4 16 3	0 12 6	Oct. 1872
5400	Cashew, c, Cumberland	35 0 0	60	55 60	1 6 0	0 2 6	Aug. 1873
1000	Corn Hill, c, Illogan	5 0 0	60	55 60	0 7 6	0 7 6	June 1873
6000	Cribb, c, Penryn	5 0 0	60	55 60	11 17 0	0 7 6	Jan. 1873
2400	Cock's Kitchen, c, Illogan	20 4 0	10	10 1/2	116 10 0	0 12 0	May 1872
10240	Devon St. Consols, c, Tavistock	1 0 0	2	1 1/2	105 16 8	0 12 0	Dec. 1872
4296	Delcath, c, Camborne	10 14 10	52 1/2	50 52	0 2 0	0 2 0	July 1874
6000	Drake Walls, c, Calstock	5 0 0	—	—	0 2 11 0	0 5 5	Feb. 1874
10000	East Balleweden, c, Sancerre	1 0 0	—	—	14 19 0	0 0 0	Oct. 1872
6144	East Cardon, c, St. Cleer	2 14 6	1 1/2	1 1/2	224 10 0	0 0 0	Oct. 1872
300	East Darnley, c, Cardigan	32 0 0	—	—	15 11 3	0 2 6	May 1873
6400	East Pool, c, Illogan	0 0 0	13 1/2	12 1/2	0 2 6	0 7 6	Oct. 1874
1906	East Wheel, c, Wendron	5 19 0	1 1/2	7 1/2	0 1 0	0 1 0	May 1873
5000	Exmouth, c, Christow	0 7 8	—	—	80 15 0	0 10 0	Sept. 1872
2800	Foxdale, c, Isle of Man	25 0 0	—	—	8 7 4	0 1 6	Jan. 1875
40000	Glasgow Carr, c, 30,000 £1 p., 10,000 10s. p.	1 1/2	1 1/2	1 1/2	17 0 0	0 6 0	Jan. 1875
15000	Great Laxey, c, Isle of Man	4 0 0	11	10 1/2	0 2 0	0 1 0	Aug. 1875
25000	Great West Van, c, Cardigan	2 0 0	—	—	18 19 0	0 2 6	June 1872
8000	Great Wheal Vor, c, Helston	40 15 0	5 1/2	5 1/2	1 12 0	0 4 0	Oct. 1874
6400	Great Wheal Vor, c, Helston	0 0 0	5 1/2	5 1/2	0 1 0	0 1 0	Dec. 1874
20000	Grosvener, c, Cardigan	0 0 0	3 1/2	3 1/2	0 1 0	0 1 0	Nov. 1874
10240	Gunnislake (Clitters), c, t	5 0 0	2	1 1/2	62 5 0	0 15 0	Oct. 1872
1024	Herodfoot, c, near Liskeard	8 10 0	3	3 1/2	4 3 0	0 6 0	Dec. 1872
18000	Hingston Down, c, Calstock	32 5 0	1 1/2	1 1/2	0 11 1/2	0 6 0	Dec. 1872
25000	Kilbuck, c, Tipperary	1 0 0	—	—	564 10 0	0 1 0	July 1874
400	Lisburne, c, Cardigan	18 15 0	—	—	0 17 6	0 1 6	Jan. 1874
5120	Lovell, c, Wendron	0 10 0	—	—	0 7 2 0	0 3 7	Jan. 1875
11000	Melindur Valley, c, Cardigan	3 0 0	3 1/2	2 1/2	63 15 2	0 2 0	Nov. 1874
9000	Minera Mining Co., c, Wrexham	5 0 0	—	—	0 8 0	0 3 6	July 1872
20000	Mining Co. of Ireland, c, t	7 0 0	—	—	0 17 6	0 2 6	Oct. 1874
12000	North Hendre, c, Wales	2 10 0	—	—	4 13 0	0 12 0	Sept. 1873
2000	North Levant, c, St. Just	12 2 0	5	4 5	0 9 0	0 9 0	Feb. 1874
7000	Old Treburget, c, ordinary shares	1 0 0	—	—	0 0 10 1/2	0 10 1/2	Feb. 1874
9000	Old Treburget, c, (10 per cent. pref.)	1 0 0	—	—	0 0 10 1/2	0 10 1/2	Feb. 1874
5000	Pedra-an-dren, c, Redruth	1 10 0	7 1/2	6 1/2	0 6 0	0 6 0	Nov. 1871
5000	Penhalls, c, St. Agnes	3 0 0	2 1/2	2 1/2	0 9 0	0 2 6	Jan. 1875
50000	Penrith, c, c, Gwennap	2 0 0	3 1/2	3 1/2	0 2 0	0 1 0	Nov. 1872
6000	Phoenix, c, c, Linkinhorne	4 13 4	4 1/2	4 1/2	39 19 10	0 4 0	Nov. 1872
1772	Polberro, c, St. Agnes	15 0 0	—	—	1 12 6	0 6 0	Mar. 1872
18000	Prince Patrick, c, Holywell	1 0 0	3 1/2	3 3/4	0 9 0	0 2 0	Jan. 1875
1120	Providence, c, Helston	16 16 7	5 1/2	5 1/2	104 12 0	0 10 0	Sept. 1872
2000	Queens, c, Holywell	2 0 0	—	—	0 2 0	0 2 0	Sept. 1874
12000	Ronan Gravel, c, Balp	7 10 0	12 1/2	12 1/2	4 10 6	0 8 0	Dec. 1872
10000	Shelton, c, St. Austell	1 0 0	—	—	0 1 0	0 1 0	Feb. 1872
512	South Cardon, c, St. Cleer	1 5 0	—	—	719 0 0	0 2 0	Oct. 1874
6000	South Carr, c, c, Illogan	2 1 6	1 1/2	1 1/2	1 1 0	0 2 6	June 1872
6000	South Carr, c, Cardigan	3 6 6	—	—	0 1 0	0 1 0	Nov. 1872
10000	St. Pr. Patrick, c, (8000 sh. issued)	1 0 0	2 1/2	2 1/2	0 4 0	0 2 0	Jan. 1875
8771	St. Just Amalgamated, c	3 10 0	—	—	0 9 0	0 4 0	Nov. 1871
12000	Tankerville, c, Balp	6 0 0	10 1/2	9 1/2	3 8 0	0 6 0	Feb. 1873
4000	Tincroft, c, c, Pool, Illogan	9 0 0	30	28 30	47 13 0	0 6 0	Nov. 1874
15000	Trevelick, c, t, Redruth	2 0 0	—	—	0 1 0	0 1 0	Mar. 1874
4000	Van, c, Llanidloes	7 10 0	1 1/2	1 1/2	9 11 0	0 10 0	Nov. 1872
2000	W. Chiverton, c, Perranarabute	4 5 0	22 1/2	21 1/2	13 19 6	0 10 0	Dec. 1872
512	West Tolvus, c, Redruth	0 9 0	2 1/2	2 1/2	82 10 0	0 5 0	June 1873
2048	West Wheal Frances, c, Illogan	27 3 9	10 1/2	9 10	3 10 6	0 6 0	Dec. 1874
512	Wheal Basset, c, Illogan	8 2 6	25	17 1/2	2 12 6	0 6 0	Oct. 1872
2048	Wheal Killy, c, Kca	2 13 10	5 1/2	4 1/2	638 10 0	0 10 0	Aug. 1872
4296	Wheal Margaret, c, St. Agnes	5 4 6	6	5 1/2	11 0 0	0 1 0	Dec. 1874
400	Wheal Margaret, c, St. Agnes	15 17 6	—	—	11 19 6	0 2 6	Dec. 1874
6000	Wheal Prusell, c, Redruth	76 5 0	80	70 75	622 10 0	0 4 0	Aug. 1872
12000	Wheal Russell, c, Tavistock	2 0 0	4 1/2	3 1/2	0 1 0	0 1 0	Dec. 1872
10000	Wheal Whistler, c, c, Warleggan	1 0 0	—	—	0 3 8	0 6 0	Nov. 1874
25000	Wicklow, c, c, Wicklow	2 10 0	—	—	0 9 0	0 2 6	Mar. 1872

FOREIGN DIVIDEND MINES.

Shares.	Mines.	Divid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
35000	Alamos, c, Spain	2 0 0	2	1 1/2	1 5 0	0 2 0	Sept. 1874
30000	Almaden and Tinto Consols, c	1 0 0	—	—	0 4 3	0 1 0	May 1873
20000	Australian, c, South Australia	7 6 0	1 1/2	1 1/2	0 13 6	0 2 0	Aug. 1874
10000	Battle Mountain, c, c, (6240 part pd.)	5 0 0	—	—	0 14 0	0 10 0	Nov. 1872
10000	Birdseye Creek, c, California	4 0 0	3 1/2	2 1/2	0 14 0	0 10 0	Nov. 1872
6000	Bensberg, c, Germany	10 0 0	—	—	0 17 4	0 8 0	July 1874
12200	Burra Burra, c, c, Australia	5 0 0	—	—	56 0 0	0 10 0	Oct. 1872
20000	Cape Copper Mining, c, c, Afr	7 0 0	31	30 31	18 15 0	0 10 0	Dec. 1874
40000	Cedar Creek, c, California	5 0 0	1 1/2	1 1/2	0 5 0	0 2 6	June 1873
50000	Central American Association, c	0 16 0	—	—	0 6 0	0 10 0	July 1869
15000	Chicago, c, Utah	10 0 0	—	—	1 4 0	0 4 0	Jan. 1875
21000	Colorado Terrible, c, Colorado	5 0 0	4	3 1/2	0 13 6	0 4 0	Jan. 1875
76162	Don Pedro North of the Key, c	0 16 0	—	—	2 5 0	0 2 0	Mar. 1872
5000	Eberhardt and Aurora, c, Nevada	10 0 0	5 1/2	4 1/2	1 0 0	0 10 0	June 1871
2352	Eldorado, c, Nova Scotia	10 0 0	—	—	2 5 0	0 15 0	June 1872
6000	Emma, c, c, Utah (25,000 fully pd.)	20 0 0	1 1/2	2 1/2	3 12 0	0 6 0	Dec. 1872
70000	English and Australian, c, St. Aust.	3 10 0	2	1 1/2	2 7 3	0 6 0	Mar. 1873
15000	Ferguson, c, California	2 0 0	—	—	4 2 0	0 3 0	April 1872
5000	Flagstaff, c, Utah	10 0 0	2 1/2	2 1/2	0 3 0	0 5 0	July 1873
25000	Fortuna, c, Spain	2 0 0	—	—	4 10 0	0 2 6	Sept. 1872
50000	Gold Run, c, Australia	1 0 0	—	—	0 2 4	0 4 0	Oct. 1872
6000	Kapunda Mines, c, Australia	1 0 0	—	—	0 14 0	0 2 0	June 1873
20000	Last Chance, c, Utah	8 0 0	1 1/2	1 1/2	14 12 0	0 2 0	Sept. 1874
10000	Linares, c, Spain	2 0 0	4 1/2	4 1/2	1 1 6	0 6 0	Mar. 1873
7837	Lusitania, Portugal (25 shares)	3 10 0	1 1/2	1 1/2	0 5 0	0 5 0	Dec. 1873
15000	Mammoth Copperopolis of Utah, c	10 0 0	—	—	0 4 0	0 4 0	Jan. 1873
5000	Mountain Chief, c, Utah	10 0 0	—	—	6 0 0	0 3 0	July 1873
10000	Prusell Mining and Ironworks, c, t	30 0 0	—	—	15 18 0	0 19 0	June 1874
10000	Port Phillip, c, Clunes	1 0 0	1	3/4	1 8 0	0 10 0	Jan. 1872
54000	Richmond Consols, c, Nevada	5 0 0	7 1/2	7 1/2	2 1 6	0 5 0	Dec. 1874
12000	Scottish Australian Mining Co., c	1 0 0	1 1/2	1 1/2	15 per cent.	—	Nov. 1874
112500	Sierra Buttes, c, California	2 0 0	—	—	1 8 0	0 2 0	Dec. 1873
60000	South American, c, Nevada	3 0 0	1 1/2	1 1/2	0 14 2	0 2 0	Nov. 1873
225000	St. John del Rey (25 stock and multiples dealt in)	26 2 1/2	—	—	10 p. c. for 1/2 year	—	Dec. 1874
15000	Sweetland Creek, c, California	4 0 0	2 1/2	2 1/2	0 11 6	0 6 0	May 1874
20000	Tolima, c, c, (6000 sh. are £5 f. pd.)	4 0 0	3 1/2	3 1/2	54 0 0	0 20 0	May 1874
18000	Westphalian, c, c, Prussia	20 0 0	—	—	1 13 4	0 10 0	Oct. 1874
5000	Western Andes, c, New Granada	5 0 0	—	—	—	—	—

NON-DIVIDEND FOREIGN MINES.

Shares.	Mines.	Divid.	Last Pr.	Clos. Pr.	Total divs.	Per share.	Last paid
20000	Anglo-Australian, c, Victoria	2 10 0	—	—	—	—	Sept. 1872
20000	Australian United, c, Victoria	2 10 0	—	—	—	—	—
30000	Bellavista, c, Peru (210 shares)	10 0 0	—	—	—	—	—
80000	Blue Tent, c, California	5 0 0	5 1/2	5 1/2	—	—	—
12000	Braganza, c, Brazil	0 15 0	—	—	—	—	Oct. 1870
80000	Cresna Sulphur Company, c, Romanga, Italy	10 0 0	—	—	—	—	—
60152	Chontales, c, c, Nicaragua (and 12,542 of £1 ls.)	10 0 0	—	—	—	—	—
6000	Clifton, c, Colorado	5 0 0	—	—	—	—	—
10000	Crescent, c, Plumas County, California	10 0 0	—	—	—	—	—
100000	Culaba, c, Minas Geraes, Brazil	0 17 6	—	—	—	—	—
10000	Douglas, c, Georgetown, Col.	5 0 0	—	—	—	—	—
35000	Excelsior Hydraulic Gold Washing Co., c, California	8 0 0	—	—	—	—	—
60000	Exchequer, c, c, California	1 0 0	—	—	—	—	Dec. 1871
55000	Frontino and Bolivia, c, New Granada	2 0 0	—	—	—	—	—
50000	General Brazilian, c	1 0 0	—	—	—	—	—
10000	Goetz Tunnel Co., c, Georgetown, Col.	7 0 0	—	—	—	—	—
40000	Holcombe Valley, c, California	1 0 0	—	—	—	—	—
6000	Hornachon, c, c, (210 shares)	9 0 0	—	—	—	—	—
20000	Imperial Brazilian Collieries, c, Brazil	5 0 0	—	—	—	—	—
20000	Independence, c, California	5 0 0	—	—	—	—	—
20000	I. X. L., c, c, California	5 0 0	—	—	—	—	—
50000	Javali, c, Nicaragua	2 0 0	—	—	—	—	—
12000	Lanerosa, c, c, Viscaya, Spain (25 shares)	1 12 6	—	—	—	—	—
65000	London and California, c	3 0 0	—	—	—	—	—
75000	Malabar, c, Colombia (65000 issued)	1 0 0	—	—	—	—	—
40000	Malaga, c, Spain	10 0 0	—	—	—	—	—
12000	Malpas, c, Colombia (10000 pref. shares, 150. paid)	1 0 0	—	—	—	—	—
12000	Menzenberg, c, Germany	5 0 0	—	—	—	—	—
14000	Montague and Waverley Gold Quartz Crushing Co., c, N. Scot.	3 0 0	—	—	—	—	—
6000	Monte Loretto, c, c, Italy	2 0 0	—	—	—	—	—
15000	New Pacific, c, c, Nevada	5 0 0	—	—	—	—	—